

## FEDERATED MALAY STATES RAILWAYS.

### ANNUAL REPORT FOR THE YEAR 1923.

#### REVIEW OF THE YEAR'S WORKING.

The working of the Federated Malay States Railways during the year 1923 produced a nett profit of \$1,710,349 compared with \$2,004,005 in 1922, representing .89 per cent. on the total capital expenditure against 1.07 per cent. last year.

2. Gross receipts have increased by \$858,782 denoting a general upward trend of traffic, attributable to the improved conditions prevailing in the country compared with the previous year.

#### MILEAGE OF LINES.

3. The section, Padang Tungku to Chigar Perah (16 miles 63 chains), was opened for traffic on 15th November, 1923.

The Johore Causeway (54 chains) was opened for goods traffic on September 17th, and for passenger traffic on October 1st, 1923.

The total mileage of running lines (reduced to single track) open on 31st December, 1923, was 1,044 miles 24 chains (including Johore leased lines) and of running lines and sidings, 1,202 miles 47 chains (as compared with 1,022 miles 59 chains and 1,161 miles 40 chains, respectively, at the end of 1922).

#### STATIONS AND HALTS.

4. The following stations were opened for traffic during the year 1923:

(a) New stations:

Bukit Kota from 15th November, 1923.

(b) Halts converted into permanent stations:

Batang Kali from 1st November, 1923.

Lawin from 8th November, 1923.

Bakap from 8th November, 1923.

(c) New halts were opened as under:

Bakap from 8th January, 1923.

Sungei Pulau from 22nd January, 1923.

Kapar Tilir from 22nd January, 1923.

Jalan Acob from 22nd January, 1923.

Sungei Serdang from 22nd January, 1923.

Sungei Sembilang from 22nd January, 1923.

Bukit Changkot from 22nd January, 1923.

Chichatinggi from 26th March, 1923.

Naga from 2nd April, 1923.

Jalan Banjar from 20th May, 1923.

Kelawar from 21st October, 1923.

Telang from 15th November, 1923.

Neram Tunggal from 15th November, 1923.

Chigar Perah from 15th November, 1923.

Woodlands Station was closed for all traffic except motor cars from 1st October, 1923.

Jalan Banjar was closed for traffic on the 14th July, 1923, and reopened on the 24th September, 1923, and again closed for the second time on the 9th December, 1923.

Naga halt was closed on the 17th May, 1923.

5. On the 31st December, 1923, there were open for traffic 238 permanent stations and 27 passenger halts.

#### CAPITAL ACCOUNT.

(See STATEMENTS 1 AND 2.)

6. The total expenditure under capital account to 31st December, 1923, is \$191,975,106, of which \$18,913,999 has been provided from the Straits Settlements Loan, 1921. The nett addition to total capital expenditure during the year was \$5,183,234 as compared with \$12,808,500 in 1922.



7. During the year \$2,042,034 was expended on new lines including Penang Hill Railway, and \$4,746,750 on widenings and additions including new wharves at Prai and the Johore Causeway. The Penang Hill Railway has been acquired by the Straits Settlements Government and the Federated Malay States Railway Capital Account is accordingly reduced by the amount of \$1,474,557 credited in 1923.

8. There have been considerable credits to capital account arising from the sale and from the use on maintenance of large quantities of stores and materials purchased for capital works in abeyance on account of retrenchment precautions.

#### REVENUE RECEIPTS AND EXPENDITURE.

(See STATEMENT No. 3.)

9. The receipts from all sources amounted to \$14,675,106 compared with \$13,816,324 for 1922, an increase of \$858,782 (6.22 per cent.).

10. The revenue expenditure on all accounts amounted to \$12,964,757 compared with \$11,812,319, an increase of \$1,152,438 (9.76 per cent.).

#### RAILWAY WORKING.

(See STATEMENT No. 4, VIII, IX, X.)

##### RECEIPTS.

11. The passenger receipts have increased by \$382,515 (7 per cent.). The number of ordinary passengers carried shews an increase of \$2,217,051 (26.27 per cent.) compared with 1922.

12. Parcels and other traffic by passenger train shew an increase of \$93,296 over 1922 and this class of traffic has regained the figure returned in 1921.

13. There is a total increase on goods train traffic of \$256,614 (4.01 per cent.) Merchandise shews an increase of \$445,823 and there are increases in all other classes of goods traffic with the exception of rubber.

14. Miscellaneous receipts shew an increase of \$28,245.

##### EXPENDITURE.

15. The total expenditure shews an increase of \$1,014,518 (9.66 per cent.) as compared with 1922, and the percentage to the total traffic receipts has increased from 83.22 per cent. to 86.22 per cent.

16. There is an increase under Maintenance and Renewal of Ways and Works (Abstract A) of \$635,138 (28.35 per cent.). The effect of the drastic reduction of expenditure in 1922, particularly in the case of Maintenance of Permanent Way Materials, is shewn in the heavy increase under this head. Maintenance of Telegraphs also shews a considerable increase. Arrears of maintenance account for \$232,700 additional expenditure under this abstract, other important items being:

\$101,037, Relaying part of the Taiping pass section.

\$ 64,928, Anti-malarial works.

\$118,821, Decauville plant taken to final debit.

17. Maintenance and Renewal of Rolling Stock shews in total an increase of about \$150,000 on last year, the bulk of which appears under materials. An amount of \$50,226 is directly attributable to arrears of maintenance. Considerable quantities of materials purchased for the rolling stock programme now in abeyance were absorbed on maintenance work.

18. There is only an increase in total of \$11,000 under locomotive running expenses, but fuel costs were \$97,000 higher than in 1922, owing principally to the consumption of the reserve stock of high-priced Indian coal. A further reduction of \$71,000 was effected under lubricants.

19. The cost of fuel per engine mile has increased from 29 cents in 1922 to 30 cents in 1923. The total running costs per engine mile are 51 cents in 1923 compared with 53 cents in 1922.

20. Traffic expenses (Abstract D) are lower by \$40,000, salaries and wages are down \$62,000 and clothing \$13,000. There is an increase of \$17,000 in electric lighting of stations and yards.

21. The items shewn under general charges shew considerable variations in comparison with 1922. Medical expenses have increased by \$11,000, pensions by \$58,000 and a new item of \$10,000 appears for fees to unofficial members of the Railway Board. In this abstract also appears the entry for writing down the value of stocks amounting to \$550,325 against \$232,183 in 1922.

22. On the other hand, there is a decrease of \$28,994 caused by the cessation of the contribution to the cost of the External Audit Department consequent upon the work of that department having been resumed by the Auditor-General's Department. There is a reduction of \$39,000 in passages of officers, and of \$116,000 in temporary allowances.

23. Assessment on Tamil labour shews a heavy increase from \$16,582 to \$50,740, due to the raising of the rate.



## STEAMER AND FERRY SERVICES.

24. These services shew a nett profit of \$76,140 compared with \$90,928 in 1922. Receipts and expenditure are both reduced in consequence of the closing of the Johore Bahru-Woodlands services from the date of the opening of the Causeway.

## DOCKS, HARBOURS AND WHARVES.

25. This account shews a nett loss of \$6,240 compared with a profit of \$17,232 in 1922. Receipts are up by \$54,000 but, on the other side of the account, there is a heavy increase of \$78,000 on account of repairs to lighters.

## ELECTRIC POWER AND LIGHT ACCOUNT.

26. This account shews a decrease in total as the bulk of the charges for train lighting have been debited direct to traffic expenses this year. The unit rate has increased from 14.4 cents to 17.1 cents.

## MISCELLANEOUS.

27. Receipts from rents shew an increase due principally to the Teluk Ayer Godowns, but the nett return from property is less than in 1922, owing to heavy expenditure on upkeep, including \$62,700 on arrears of maintenance and \$15,000 for alterations to the roof of the Station Hotel, Ipoh.

General interest shews an increase of over \$29,000.

## TRAFFIC DEPARTMENT.

## THROUGH TRAFFIC, F.M.S. RAILWAYS AND SIAM.

28. There was an increase during the year in all classes of passenger traffic between the Federated Malay States Railways and Siam.

29. Goods and parcels traffic also shew an increase.

Particulars of traffic for the last three years are given below :

		1921. No.	1922. No.	1923. No.
Through passenger traffic, F.M.S.R. to Siam	1st class ...	547	835	880
	2nd „ ...	1,750	1,545	1,642
	3rd „ ...	17,169	17,008	18,645
		19,466	19,388	21,167
		1921. No.	1922. No.	1923. No.
Through passenger traffic, Siam to F.M.S.R.	1st class ...	784	1,071	1,125
	2nd „ ...	2,507	2,007	2,588
	3rd „ ...	18,223	16,253	19,010
		21,514	19,331	22,723
		Pkls.	Pkls.	Pkls.
Goods traffic.				
F.M.S.R. to Siam	...	287,489	70,797	87,467
Siam to F.M.S.R.	...	331,160	205,247	386,248
		No.	No.	No.
Parcels traffic.				
F.M.S.R. to Siam	...	1,061	1,622	3,482
Siam to F.M.S.R.	...	70	309	1,124

30. The Causeway over the Straits of Johore, between Johore Bahru and Woodlands, was opened on 17th September, 1923, for goods trains and on 1st October, 1923, for passenger trains, from which dates trains have worked through to and from Singapore. By the opening of the Causeway, the transport of goods and other traffic between the mainland and Singapore Island has been considerably accelerated. Simultaneously with the opening of the Causeway for goods and passenger traffic the wagon ferries and steam launches which had previously maintained the goods and passenger services across the Straits between Johore Bahru and Woodlands were withdrawn.

31. On and from 1st October, 1923, a system of classification of all Signal Cabins on the Railway was introduced and the signalmen are now booked for 8, 9 or 10 hours' work per diem according to the class of cabin at which they work.

22. With effect from 1st October, 1923, the duty hours of Guards and Ticket Collectors were increased from 8 to 10 hours per diem.

33. A new working time table was issued from 1st October, 1923, from which date the night mail train service between Kuala Lumpur and Prai was reinstated.

34. Agri-horticultural Shows were held in different parts of the country during 1923 and exhibitors, their exhibits and visitors were conveyed to and from these shows at reduced rates.



35. Public concession tickets were issued on five occasions during the year.

36. Commencing from November 2nd, 1923, week-end tickets for 1st and 2nd class passengers at single fare and a quarter for the double journey from certain principal stations were issued for journeys of not less than 100 miles.

37. In connection with the Jubilee of H.H. The Sultan of Selangor, cheap return tickets, all classes, were issued at single fare for the double journey from all stations in the State of Selangor to Klang on 14th and 15th December.

38. To stimulate passenger traffic temporary reductions in passenger fares were introduced on the following sections of the railway:

Sultan Street	...	...	...	Ampang Section
"	...	...	...	Sungei Besi Section
Seremban	...	...	...	Port Dickson Section
Klang North	...	...	...	Kuala Selangor Section
Ipoh	...	...	...	Tronoh Section
Tampin	...	...	...	Malacca Section
Taiping	...	...	...	Parit Buntar Section
Kuala Lumpur	...	...	...	Seremban Section
Kelantan Section	...	...	...	
Kuala Lumpur	...	...	...	Tanjong Malim Section
Penang, Prai	...	...	...	Alor Star Section

39. Revised rates for perishable traffic were introduced from 1st October, 1923, and for vehicles and live-stock from 15th October, 1923. A new scale of Port Charges was introduced on 1st December, 1923.

40. The stations Rompin to Kuala Pilah inclusive, Ayer Kring and Kemayan are now in charge of Malay Station Masters.

#### TRAFFIC AT PORT STATIONS.

41. The following is a comparison of goods and mineral traffic dealt with at the port stations during the last ten years:

Date.	Penang.		Prai.		Port Weld.	
	Received via Prai.	Forwarded via Prai.	Received by rail.	Forwarded by rail.	Received by rail.	Forwarded by rail.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1914	...	...	11,862	26,942	10,601	67,398
1915	...	...	11,213	23,512	4,180	40,691
1916	...	...	13,204	27,123	12,754	23,288
1917	...	...	18,758	30,714	13,521	9,930
1918	...	...	22,280	37,913	20,324	12,238
1919	...	...	30,388	31,076	57,030 *	28,071
1920	...	...	27,549	28,168	62,989 *	52,110
1921	...	...	22,617	27,837	106,923 *	44,142
1922	...	...	21,166	28,159	122,030 *	35,789
1923	...	...	25,351	25,013	37,674 *	28,308
						8,370
						114,598

\* Includes stone traffic in connection with construction of new wharves.

Date.	Teluk Anson Wharf.		Port Swettenham.		Port Dickson.	
	Received by rail.	Forwarded by rail.	Received by rail.	Forwarded by rail.	Received by rail.	Forwarded by rail.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1914	...	...	42,496	120,820	53,414	233,046
1915	...	...	41,713	125,406	53,542	171,345
1916	...	...	42,516	122,699	58,670	158,537
1917	...	...	41,798	109,244	64,228	144,267
1918	...	...	43,905	87,962	60,157	135,420
1919	...	...	43,080	76,924	68,505	141,875
1920	...	...	40,012	62,379	68,317	183,675
1921	...	...	41,334	37,343	63,415	140,934
1922	...	...	47,525	33,322	69,271	134,764
1923	...	...	50,214	46,903	71,716	184,660
						8,538
						12,520

These figures do not include fuel, stores, or railway material for the Railway Department carried free. Practically all traffic forwarded from Penang is transhipped at Prai and forwarded by train, so that the figures for the two stations should be added together to obtain the total tonnage forwarded from Prai.

42. Forty-five thousand five hundred and eighteen tons of rubber were exported through Port Swettenham during 1923, against 46,604 tons in 1922.



## OCEAN STEAMERS CALLING AT PORT SWETTENHAM.

43. During 1923, 203 ocean steamers called at Port Swettenham with import cargo as against 237 during 1922, and 175 ocean steamers called for export cargo as against 139 during 1922.

The ocean steamers calling at Port Swettenham include the following:

	Calling with import cargo.	Calling for export cargo.
Ben Line ... ..	19	—
Glen Line ... ..	19	—
Blue Funnel ... ..	35	58
Shire Line ... ..	4	—
P. & O. Steam Navigation Company ...	7	22
British India Steam Navigation Company	66	28
Ellerman and Bucknall Line ... ..	4	31
Asiatic Petroleum Company's Oil Boats	19	—
Others ... ..	30	36
Total ... ..	203	175

## WAGON FERRY, JOHORE BAHRU-WOODLANDS.

44. The wagon ferry service between Johore Bahru and Woodlands worked satisfactorily up to 16th September, 1923. From 17th September, 1923, all goods trains worked through to and from Singapore over the Causeway and the wagon ferry service was withdrawn. The following figures shew the number of vehicles dealt with by the ferries:

—	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923 upto 16th Sept.
Loaded wagons forwarded to Singapore	9,508	11,801	15,085	19,211	20,900	22,471	21,166	12,360
Empty wagons forwarded to Singapore	12,517	15,811	10,961	8,432	8,088	6,814	4,952	7,320
Loaded wagons received from Singapore ...	21,824	26,950	25,002	25,324	24,716	24,045	21,632	16,828
Empty wagons received from Singapore ...	377	54	468	1,777	3,409	5,072	4,270	2,520
Total number of trips	7,583	9,529	9,171	10,680	12,548	11,953	11,007	7,777

## TELEGRAMS.

45. The total number of telegrams dealt with in 1923 amounted to 881,357, an increase of 27,384 as compared with 1922.

## ACCIDENTS, DERAILMENTS, ETC.

46. Forty fatal accidents were recorded during 1923. Of these, seven were railway servants, two passengers and the remainder trespassers on the railway line. The persons killed were of the following nationalities:

	Railway servants.	Others.	Total.
Tamils ... ..	6	14	20
Chinese ... ..	1	16	17
Malays ... ..	—	2	2
Nationality not known ... ..	—	1	1
Total ... ..	7	33	40

47. Sixty-six cases of personal injury were recorded during 1923 as detailed below:

Railway servants ... ..	51
Passengers ... ..	3
Trespassers ... ..	12
Total ... ..	66



48. There were 190 derailments during 1923 as under :

Engines	...	...	...	...	...	...	...	34
Goods vehicles	...	...	...	...	...	...	...	147
Passenger coaches	...	...	...	...	...	...	...	2
Brake vans	...	...	...	...	...	...	...	7
Total								190

Of these, 158 occurred within station limits and 32 at intermediate sidings and on line between stations.

49. Level crossing gates were run into and damaged on nine occasions during 1923 as under :

By trains	...	...	...	...	...	...	...	4
By motor cars	...	...	...	...	...	...	...	5
Total								9

50. On ten occasions during the year, stations or refreshment rooms were broken into by thieves and railway or other property stolen.

51. A total sum of \$8,017 was paid out as claims compared with \$5,643 in 1922; of this amount \$1,052 was recovered.

52. Rents for hotels, restaurant cars, and food stalls realised \$90,990 as against \$95,918 in 1922.

#### WAYS AND WORKS DEPARTMENT.

53. The permanent way was maintained in efficient working order during the year, and amongst the renewals made were the following :

Rails	...	...	...	...	...	...	...	1,483
Points	...	...	...	...	...	...	...	123
Crossings	...	...	...	...	...	...	...	176

54. The length of sidings put in, extended or taken over from the Construction Department in 1923, was 22 miles 59 chains and 08 links, and the length of sidings taken out during the year was 3 miles 17 chains and 92 links.

#### WAYS AND WORKS DEPÔT.

55. The following is a summary of the chief items manufactured at the Ways and Works Dépôt during the year 1923 :

Concrete dust bins	...	...	...	...	...	...	...	61
„ fencing posts	...	...	...	...	...	...	...	810
„ channels	...	...	...	...	...	...	...	6,188
„ paving blocks	...	...	...	...	...	...	...	762
„ pointsman huts	...	...	...	...	...	...	...	6
„ name boards	...	...	...	...	...	...	...	43
Points	...	...	...	...	...	...	...	44
Crossings	...	...	...	...	...	...	...	89
Diamond crossings	...	...	...	...	...	...	...	5
Special rails	...	...	...	...	...	...	...	42
Buffer stops	...	...	...	...	...	...	...	23

56. The following materials were reconditioned from scrap :

Dog spikes	...	...	...	...	...	...	...	13,556
Fish and other bolts	...	...	...	...	...	...	...	140
Changkols	...	...	...	...	...	...	...	622
Stone rakes	...	...	...	...	...	...	...	188
Spanners	...	...	...	...	...	...	...	52
Jungle cutting knives	...	...	...	...	...	...	...	4
Beater heads	...	...	...	...	...	...	...	376

57. One small steam hammer with boiler was transferred from the Signal and Telegraph Engineer's Workshops and a cold saw was erected and installed during the year.



## LEVEL CROSSINGS.

58. Two public level crossings and six occupation crossings were provided during the year, whilst one public level and one occupation crossings were closed.

## BRIDGES AND CULVERTS.

59. The girders of 225 bridges were painted during the year; 42 longitudinal timbers were renewed; five new bridges and culverts were built; two bridges and culverts were reconstructed in order to give increased waterway. Steel work of 21 bridges was renewed and strengthened during the year.

## FENCING.

60. Two hundred and eighty-five miles of fencing were maintained during the year, 10 miles of new fencing were erected and 3,064 fencing posts were renewed.

## WHARVES AND JETTIES.

61. All wharves and jetties were maintained in good repair during the year. Renewals of piles and timbers were carried out as required. The quay and the wharf frontage at the close of the year amounted to 3,556 lineal feet.

## SLIPS AND FLOODS.

62. There were 55 minor slips during the year and the line was flooded at eight places on different occasions, but there was no serious damage to the line.

## RELAYING.

63. Relaying with Australian 80 lbs. rails was carried out from T. P. 63/13 to T. P. 67/27 Pass Section.

## MAINTENANCE.

64. The total length of running line, 1,044 miles 24 chains, and sidings, 158 miles 23 chains, were maintained at a cost of \$151.82 per mile per month as compared with \$140.58 for 1922. The cost of maintenance during 1923 has been \$233,709 more than in the previous year.

## REST-HOUSES AND HOTELS.

65. All the rest-houses and hotels were maintained during the year in efficient condition.

## ANTI-MALARIAL WORKS.

66. Anti-malarial works have been carried out during the year in the following places: Padang Besar, Gangs 31 and 32 Kedah Line, Bukit Mertajam, Ayer Kuning North, Bukit Berapit, Ipoh, Pumpang Halt, Bidor, Sungkai, Behrang, Tanjong Malim, Rawang, Kuang, Kepong, Pengkalan Kundang, Seremban, Tampin, Batang Benar, Gang Lines 110, 111 and 131 Gemas, Johore Bahru, Labis, Woodlands, Syers Road, Maxwell Hill and Central Workshops.

## SPECIAL SERVICES.

67. The value of the special service works carried out during the year by this department was \$669,329 on revenue account, and \$95,609 on capital account as compared with \$224,491 and \$578,638, respectively, during the previous year. The principal items of expenditure were:

Relaying 63rd to 71st mile, main line	...	...	...	\$101,037
Anti-malarial works (foreseen)	...	...	...	27,042
Arrears of maintenance, Ways and Works	...	...	...	302,755
Marshalling sidings, engine and carriage shed, Gemas	...	...	...	49,819

## LOCOMOTIVE DEPARTMENT.

## LOCOMOTIVES, ROLLING STOCK, ETC.

68. All locomotives, carriages, wagons, motor cars, steamboats, tongkangs, machinery and other plant were maintained in an efficient state during the year.

69. In statement VII details are given of the number of locomotives and other rolling stock renewed and repaired during the year.



## LOCOMOTIVES.

70. No new locomotives were added to the stock.
71. One tank engine No. 130 (B. Class) was sold to the Malayan Collieries Limited. The open line stock of locomotives, including the four steam rail motors, was 232 on the 31st of December, 1923, one less than at the end of 1922. The number of Construction Department locomotives remained at 24 as in 1922.

## MILEAGE OF ENGINES AND TRAINS.

72. The total engine mileage, including maintenance ballast miles, for the year was 5,028,925 as compared with 4,823,525 in 1922, an increase of 205,400 miles or 4.26 per cent.
73. The train mileage was 3,588,034 as against 3,401,721 in 1922, an increase of 186,313 miles or 5.48 per cent.
74. The increase both in engine and train miles over the previous year is due to additional train services.

## RUNNING COSTS.

75. The total running cost per engine mile for the year 1923 was 51 cents (*vide* Abstract C), as compared with 53 cents in 1922.

## FUEL.

76. The following table gives particulars of firewood and coal consumed by locomotives during the year:

Description of fuel.	Local weights.		In terms of imported coal.			
	Pkls.	Kts.	Tons.	Cwt.	Qrs.	Lbs.
<i>Bakau firewood.</i> —						
Converted at a ratio of $2\frac{1}{2}$ to 1 of imported coal ... ..	273,344	73.	6,508	4	0	18
<i>Jungle firewood.</i> —						
Converted at a ratio of 3 to 1 of imported coal ... ..	303 $\frac{1}{2}$	passangs	227	12	2	00
	Tons. Cwt. Qrs. Lbs.					
<i>Rawang coal.</i> —						
Converted at a ratio of 1.6 to 1 of imported coal ... ..	153,632	10 2 7	96,021	6	2	11
Imported coal ... ..	—		4,639	10	3	00
Total ...			107,396	14	0	01

The consumption of fuel in 1923 per engine mile and train mile works out at lbs. 47.46 and 66.51 as compared with lbs. 46.98 and 66.62, respectively, in 1922, in terms of foreign coal.

## MACHINERY.

77. All machines were maintained in good order throughout the year.
78. An oxy-acetylene welding plant was installed in the boiler shop during the year.
79. All tanks and water columns, turntables, weighbridges, weighing machines and cranes and pumps were maintained in good order during the year.
80. One new 60-foot turntable was erected at Gemas and the 55-foot turntable there was dismantled.
81. One 10-ton fixed hand crane was dismantled at Prai and sold to Messrs. The Siam Coal Mine Company.

## COACHING VEHICLES.

82. The details of coaching stock are shewn in statement II C.
83. No new bogie passenger carriages were built at the works during the year.
84. One bogie 1st class No. 5, one bogie 3rd class No. 51 and three bogie third vans Nos. 18, 26 and 73 were condemned as unfit for further service.
85. Eight four-wheeled coaches were condemned during the year.
86. Two hundred and fifty-nine coaching vehicles of all types passed through the shops for heavy and light repairs during the year, as compared with 180 in 1922, at an average cost of \$1,314 per vehicle as compared with \$1,205 in 1922. The figure of 259 includes 42 vehicles which are shewn in statement VII (Abstract B) under the heading "Other Coaching Vehicles". Details of repairs are given in that statement.



## GOODS VEHICLES.

87. Details of goods vehicles are given in statement II D and E.
88. The total number of bogie goods vehicles on 31st December, 1923, was 204 as compared with 206 at the end of 1922.
89. Two bogie goods vehicles have been converted into refrigerator vans and are now transferred to "Other Coaching Vehicles," statement II C.
90. Two bogie coal trucks were converted into bogie tank wagons for the conveyance of water.
91. Ten 18-ton goods brake vans were built at the works during the year.
92. Four covered goods vehicles (8-ton) were converted as loco. tool vans for carrying breakdown equipment.
93. Ten steel covered goods vehicles (10-ton) were converted into latex tank wagons.
94. Seven steel high side wagons (10-ton) were converted into armoured trucks and sold to the Malay States Volunteer Regiment.
95. Fifteen high side wagons and two covered goods vehicles were sold to the Siam Coal Mines & Company.
96. One thousand and seventeen wagons of all types passed through the shops for heavy and light repairs during the year as compared with 976 in 1922.

## STEAM BOATS, ETC.

97. Motor launch "Tungku Meriam" and steam launch "Sah" were sold to Messrs. The Singapore Ship Chandlery Company.
98. Ten steam launches, three at Prai, five at Port Swettenham and two at Kota Bahru (Palekbang), maintained the passenger ferry and tug services during the year.
99. s.r. "Betty", s.s. "Johore" and s.s. "Singapore" were awaiting disposal at the end of the year.
100. Ferry barges Nos. 1, 2 and 3 released as a result of the opening of the Johore Causeway are being retained for future use elsewhere.
101. The slipway at Port Swettenham was handed over to the Marine Department on 24th April, 1923, and repairs to lighters have since been carried out by the Marine Department.
102. Forty tongkangs were repaired on the foreshore and eleven on the slipway at Port Swettenham during the year.
103. Sixteen lighters were sent to Singapore for repairs.
104. The total stock of steel and wooden lighters in service was 53 and 26 as compared with 52 and 26, respectively, in 1922.
105. The fleet of ferry and tug boats, including the wagon ferries, on 31st December, 1923, was 16 as compared with 18 in 1922.
106. The mileage of ferry boats plying between Penang and Prai, Johore Bahru and Woodlands, Kota Bahru and Palekbang, and wagon ferries at Johore Bahru was 79,397 as compared with 82,160 in 1922, the mileage of launches at Port Swettenham not being reckoned.

## ELECTRICAL BRANCH.

107. All electrical installations and plant were maintained in good working order during the year.
108. Train lighting on the whole was satisfactory.
109. Ninety-three coaches were overhauled as they passed through the shops and twelve coaches were reconditioned.
110. Considerable electrical work was done in connection with the opening of the Causeway between Johore Bahru and Woodlands, including the laying of lead armoured cables with connections to the chain defence and lifting bridge motors and the lighting of the Causeway Lock.
111. Electric light was installed in the District Offices, Gemas, Railway Institute, Ipoh, and Taiping yard.

## TIMBER DEPARTMENT.

112. The Timber Department ceased to be a sub-department of the Railway Administration from 1st January, 1923, and became a branch of the Forestry Department.



## STORES DEPARTMENT.

113. There was no remarkable variation in prices on general items during the year but there were considerable decreases in prices in the case of lubricating oils, kerosene oil and coke.

114. Surplus stocks have been considerably reduced by sales, to other departments, and to the public, amounting to \$52,485. Sales of second-hand and scrap material conducted by the Stores Department amounted to \$95,493.

115. The writing down of certain stocks to normal prices occupied the latter part of the year and resulted in the following figures:

Department.	Stock prior to writing down.	Amount written down.	Stock after writing down.
	\$ c.	\$ c.	\$ c.
General Stores (including General, Stationery and Medical) ... ..	589,522 15	188,905 23	400,616 92
Locomotive (including Sub-Stores) ...	266,488 08	69,951 56	196,536 52
Electrical Stores ... ..	135,904 53	36,265 97	99,638 56
S. & T. E. ... ..	330,682 15	75,918 03	254,764 12
Ways and Works Depôt ... ..	141,226 98	63,656 32	77,570 66
Construction ... ..	418,958 64	105,038 33	313,920 31
Total ...	1,882,782 53	539,735 44	1,343,047 09

The stocks mentioned do not cover total stocks but are only those on the books at high prices necessitating adjustment to normal rates.

116. Prior to this general writing down, hotel equipment items had already been written down in August to the extent of \$10,590.

117. During the year under review payment was made, in respect of stores and materials purchased, to the amount of \$965,501, being a reduction of \$1,196,934 as compared with 1922.

118. The former figure is made up as follows:

Crown Agents ... ..	\$386,763
Purchases from other Government departments ... ..	55,892
Other local purchases ... ..	521,093
Australia ... ..	1,753
Total ...	\$965,501

119. Total sales amounted to \$2,077,189, which figure includes the value of stock written down, viz., \$381,630 and also losses by sales at replacement prices during the year amounting to \$14,818. Compared with 1922, the above gross sales figure shews a decrease of \$327,185.

120. Sales from R.S.A. account only shew an increase of \$83,558 as compared with the previous year. In addition, sales amounting in value to \$10,838 were arranged by the Stores Department on behalf of Construction Department.

121. Stores and materials stocked on R.S.A. account on 31st December, 1923, amounted to \$1,496,065, a decrease of \$1,052,264, of which amount \$381,630 is accounted for by writing down of stock values and \$14,818 by loss on sales at replacement prices. In addition, materials to the value of \$390,226 were on hand in Australian Suspense Account on 31st December, 1923.

122. Indents to the number of 66 and of an estimated value of \$450,450 were despatched to the Crown Agents, as compared with 52 indents of an estimated value of \$355,659 despatched in 1922.

123. The Stores Department executed 13,153 indents in 1923 as compared with 11,315 in 1922.

124. Shipments of stores and materials from Crown Agents aggregated 1,219 tons as against shipments of 1,328 tons in 1922.

125. The tailoring shops executed uniform orders comprising 6,998 suits, 294 caps, 154 cash bags, 2,285 flags, singlets, chevrons, etc. They also repaired and reconditioned the bedding of sleeping coaches as required.

126. The clock and watch repairing department executed repairs to three tower clocks, 139 other clocks and 201 watches, also regulating and fixing other railway clocks and watches as required.



## SIGNAL AND TELEGRAPH DEPARTMENT.

## TELEGRAPHS.

127. The total length of railway telegraph, telephone, tablet, bell and repeater wires on 31st December, 1923, was 4,355 miles 20 chains, an increase of 149 miles 33 chains on the previous year.

128. Three new Telegraph Offices were opened during the year, viz., Mata Ayer, Sungei Toh Pawang and Bukit Kota, making a total of 259 telegraph stations.

129. All telegraph instruments and batteries were cleaned and maintained in good working order.

## TELEPHONES.

130. An additional switchboard of twenty numbers was added to the Ipoh Telephone Exchange, and a twenty-five number switchboard was installed at Johore Bahru with a trunk line connection to Tank Road Exchange.

131. Twelve telephones were fitted for offices and quarters connecting the switchboard at Johore Bahru. Thirteen additional telephones were fixed in connection with the exchange at Kuala Lumpur and one at Ipoh. An emergency night telephone was installed at Kluang, and a night telephone Kuala Lumpur-Gemas was connected to No. 2 Main from Kuala Lumpur to Seremban.

132. The telephones in the office of the train controller worked very satisfactorily during the year.

133. The Johore Causeway rolling lift bridge "safe working" consists of a system of electrical lever locking working in conjunction with the block tablet section Johore Bahru-Woodlands. The electrical motor signals and telephonic communication between Johore Bahru Signal Cabin and Woodlands were installed and have worked satisfactorily. A temporary pole route was erected over the Causeway for the lines required for the Causeway Bridge working.

134. The cable Johore Bahru-Woodlands having again become defective was put out of use. The lines are now carried over the Causeway on a temporary pole route.

## ELECTRIC TRAIN TABLETS.

135. Four tablet instruments were installed for the sections Padang Tungku-Bukit Kota and Johore Bahru-Woodlands and a tablet line was erected from Johore Bahru to Woodlands.

136. All the tablet instruments and batteries were cleaned and maintained in good working order during the year.

137. The total number of tablet failures during the year throughout the railway was 220, compared with 251 in 1922.

## POSTS AND TELEGRAPHS DEPARTMENT WIRES ON RAILWAY POLES.

138. The total length of Posts and Telegraphs and other wires on railway poles on 31st December, 1923, was 368 miles 46 chains, a decrease of 492 miles 77 chains, which length was dismantled during the year.

139. The Posts and Telegraphs Department and other lines on railway poles were maintained and kept in working order.

## SIGNALLING AND INTERLOCKING.

140. Signalling installations at Bukit Kota, Johore Bahru, and those in connection with the Causeway were completed and brought into use. The signalling and interlocking at Tampin North were in progress at the end of the year.

141. One 5-lever and one 10-lever ground frame at Johore Bahru and one 3-lever ground frame at Woodlands were installed. Two ground frames and fittings were fitted for the triangle at Taiping.

142. Fifteen new signals were erected. Thirty-nine signals were renewed and twenty-six moved to fresh sites during the year.

143. One hundred and seventy-two signal arms and one hundred and one timber frames were renewed.



## SIDINGS.

144. The new siding, Mandai Quarry, was interlocked and the interlocking at the old siding dismantled.
145. The interlocking at Boo Bee's Siding and Muda River Siding was dismantled and the fittings of the tablet siding at Ayer Kuning North were removed.
146. A new siding was interlocked at Kuang for the United States Rubber Plantations.
147. The construction sidings at Batu Junction and Seremban were dismantled.

## SIGNAL AND TELEGRAPH WORKSHOPS AND STORES.

148. The machinery in the workshops worked satisfactorily. As usual, a fair percentage of signalling and other materials necessary for departmental use was made.
149. The 20 h.p. motors were brought into use during the year.

## RAILWAY POLICE.

150. The approved and actual strengths on January 1st and December 31st, 1923, were 827 and 798, respectively.

151. During the year, 91 men presented themselves for enlistment. Of this number, 72 of the nationalities detailed below were found to be medically fit and were appointed:

Sikhs ...	...	...	...	...	...	...	...	...	44
Hindus	...	...	...	...	...	...	...	...	3
Pathans	...	...	...	...	...	...	...	...	18
Punjabi Mohammedans	...	...	...	...	...	...	...	...	7
Total ...									<u>72</u>

152. During the year, 74 were struck off the strength. Of these four died, two were pensioned, twelve were dismissed, thirty-one resigned and twenty-five were discharged.

153. The discipline of the force shows improvement. Two hundred and eighty-four men were dealt with departmentally as compared with three hundred and sixteen in 1922. The fines imposed amounted to \$473 as compared with \$609 in the previous year. Thirty constables were charged before the Magistrate with offences which included theft, voluntarily causing hurt, and disorderly conduct. Of these twenty were convicted and the remaining ten were discharged.

154. The detective branch of the force was kept at full strength during the year and did useful work in investigation and detection.

## PROSECUTIONS.

155. There were nine hundred and eighty-two prosecutions during the year, classified as under:

1. Offences under Railway Enactments	...	...	...	...	531
2. Thefts	...	...	...	...	131
3. Possession of stolen property	...	...	...	...	52
4. Criminal breach of trust	...	...	...	...	1
5. Criminal misappropriation	...	...	...	...	14
6. Cheating	...	...	...	...	3
7. Receiving illegal gratification	...	...	...	...	3
8. Abetting the offence of giving an illegal gratification	...	...	...	...	7
9. Assault and voluntarily causing hurt	...	...	...	...	79
10. Other offences	...	...	...	...	161
Total ...					<u>982</u>

156. The prosecutions under the Railway Enactments shew a decrease of 65 over 1922.

157. Out of the total number of prosecutions 751 resulted in conviction.

158. There were 146 prosecutions against railway employees, resulting in 79 convictions, and the accused in such cases were subsequently dismissed from the service.

159. The total fines imposed by the Courts amounted to \$6,393, a decrease of \$471 compared with 1922.

160. Fifty Malays were recruited for training as railway police constables during the year.



## HEALTH DEPARTMENT.

161. During the first six months of the year under review two Health Officers were seconded from the Medical Department for work on the Federated Malay States Railways, one officer being in charge of the district north of Segambut and the other Segambut and south thereof.

162. During the latter half of the year, one officer was in charge of the whole of the line.

163. The year 1923 is believed to have been exceptionally healthy throughout Malaya and the Federated Malay States Railways sick rates, particularly from malaria, shew a decided decrease compared with the previous year.

164. There were no epidemics amongst the railway staff.

165. The clerical staff of the Federated Malay States Railways were examined for tuberculosis, and out of 903 examined in the Head Office, two positive cases were found, both being Chinese. Other station staffs were examined locally or at the nearest hospital.

166. Anti-malarial work has been carried out in many parts of the system. Two oiling gangs were at work, one in Johore and one north of Ipoh. These gangs only deal with isolated stations and gang lines where local arrangements are impossible.

167. The Railway Hotels at Kuala Lumpur and Ipoh were inspected twice during the year, as were the food stalls at the larger stations.

168. First-aid hampers were maintained at the principal stations and arrangements made for all passenger trains to carry stretchers.

169. The night mail trains were regularly sprayed throughout with "Lotol" which had a marked effect in diminishing the mosquito nuisance.

## PUBLIC OFFICERS' GUARANTEE FUND.

170. The number of officers in the Railway Department contributing to the P.O.G. Fund was 2,321 as compared with 2,416 at the end of the previous year. The entrance fees and contributions amounted to \$4,546.

## WIDOWS AND ORPHANS' PENSION ENACTMENT.

171. There were 899 railway contributors under the W. and O. Pension Enactment at the end of 1923 as compared with 935 at the end of 1922.

## RAILWAY SERVANTS' BENEFIT FUND.

172. The total receipts on account of the Railway Servants' Benefit Fund during the year amounted to \$5,121, an increase of \$704 on 1922. The payments from the Fund totalled \$5,294, leaving a balance to the credit of the Fund on 31st December, 1923, of \$11,214.

## STATION AUDITS.

173. One thousand seven hundred and thirty-nine station audits were held during the year comprising 1,485 complete, 119 partial and 135 surprise audits. There were in addition 242 complete and 72 partial inspections carried out by Audit Inspectors.

## VERIFICATION OF STORES.

174. Thirty-seven examinations of stores were made during the year, composed of 25 complete, 10 partial and 2 surprise verifications.

## TICKET PRINTING.

175. During the year, 12,749,539 ordinary tickets were printed and issued to stations. The percentages to classes were:

First	...	...	...	325,904	...	2.56 per cent.
Second	...	...	...	1,238,042	...	9.71 "
Third	...	...	...	11,145,917	...	87.42 "
Bicycle	...	...	...	38,101	...	.30 "
Motor cycle	...	...	...	1,575	...	.01 "

176. In addition special tickets were printed for week-end, privilege and other concession arrangements.



## EXAMINING AND PROMOTIONS BOARD.

177. In connection with the revised schemes for the clerical service and for technical subordinates permanent examining and promotions boards have been appointed. During 1923 the first preliminary and junior examinations under the clerical scheme were held, at which 400 and 326 candidates, respectively, were examined.

## RAILWAY BOARD.

178. The original title of the Board, namely, that of "Railway Advisory Board" was altered in March, 1923, to read "Railway Board" and considerable time was subsequently spent in considering the question of the Board's powers and duties, together with that of financial control. Revised regulations in both respects were adopted with the approval of Government in October.

179. During the year, power was vested with the Board to deal with local tenders and contracts which exceed the departmental limit of \$10,000 previously imposed by Government.

## COMMITTEES.

## RATES AND FARES ADVISORY COMMITTEE.

180. This committee met on nine occasions, the most important matter dealt with being a complete revision of goods rates and port charges.

At the close of the year the committee comprised:

Mr. D. A. M. Brown (*Chairman*).

The Hon'ble Mr. Choo Kia Peng, M.F.C.

Mr. H. B. Egmont Hake.

Major W. H. Elkins (Assistant Traffic Manager).

Mr. R. P. Walker (Acting Deputy Accountant).

Mr. A. Allan (General Manager's Department).

## ESTIMATES COMMITTEE.

181. A committee, formed of the following members, was appointed in April to consider in detail the expenditure estimates for the year 1924:

The General Manager;

The Acting Director of Public Works;

The Treasurer, Federated Malay States;

The Hon'ble Mr. Choo Kia Peng, M.F.C.

Mr. J. A. Russell.

The committee sat on three occasions and carried out a complete enquiry into the Annually Recurrent Expenditure Estimates.

## COMMITTEE ON RAILWAY STATISTICS.

182. This committee, appointed in November, 1923, met on one occasion before the close of the year. The committee was formed in order that members might become acquainted with the departmental statistics already prepared and to ascertain in what direction further statistics might be helpful. The committee's investigations were proceeding at the end of the year, when its personnel consisted of:

The General Manager;

Mr. H. B. Egmont Hake;

Mr. G. E. Teale;

Mr. R. H. Bilke (Chief Accountant, F.M.S.R.).

## INSPECTIONS, ETC.

183. Members of the Board visited constructional works as under during the year:

April ... .. Doubling of the line, Batu Junction to Kuala Lumpur and Sungei Besi.

Doubling of the line, Singapore Railway, etc.

Gemas, Marshalling Sidings, etc.

Seremban, Carriage and Engine Sheds and Goods Yard.

May ... .. Ipoh, Carriage and Engine Sheds and Goods Yard.

September ... East Coast Line, Kelantan-Pahang.

An inspection of the instruction coach for drivers and firemen was made in March, and a complete tour of the Locomotive Workshops and the Ways and Works Depôt at Sentul, was made in December.



184. Regular monthly meetings were held throughout the year.

185. The personnel of the Board was augmented in October by the appointment of the Chief Accountant, Federated Malay States Railways. During the course of the year, Messrs. D. H. Hampshire and J. A. Russell proceeded on long leave to Europe and Mr. H. B. Egmont Hake was appointed by Government to act as a member of the Board during the absence of the substantive members.

186. The following gentlemen constituted the Board at the close of the year:

The General Manager of Railways (*Chairman*).  
 The Acting Director of Public Works, Federated Malay States.  
 The Treasurer, Federated Malay States.  
 The Hon'ble Mr. V. Gibbons, M.L.C. (Straits Settlements).  
 The Hon'ble Mr. Choo Kia Peng, M.F.C. (Federated Malay States).  
 Mr. D. A. M. Brown, Penang.  
 Mr. D. H. Hampshire, Kuala Lumpur.  
 Mr. J. A. Russell, Kuala Lumpur (on leave).  
 Mr. G. E. Teale, Kuala Lumpur.  
 The Chief Accountant (Mr. R. H. Bilke).  
 Mr. H. B. Egmont Hake, Kuala Lumpur (Acting).  
 Mr. G. L. Miller (General Manager's Department) acted as Secretary to the Board throughout the year.

#### CONSTRUCTION DEPARTMENT.

187. The total expenditure during the year on construction and surveys of new lines in the Federated Malay States, Straits Settlements and Johore amounted to \$6,788,784 as compared with \$11,959,768 for the year 1922.

#### EAST COAST RAILWAY: KELANTAN SECTION.

188. This Railway starts from Tumpat and proceeds southwards towards Kuala Lipis in Pahang, the distance from Tumpat to the Pahang-Kelantan boundary being 140½ miles.

The line from Tumpat to Tanah Merah (32 miles) was opened for traffic on July 1st, 1915. Construction was stopped for three years during the war and recommenced from Tanah Merah southwards in January, 1918.

All necessary land has been acquired to the Pahang boundary from Tanah Merah. Felling and clearing have been completed as far as the 89th mile.

Main line earthwork between Kuala Krai and Manek Urai is completed, except for gaps left for culverts and bridges. Between Manek Urai and Kuala Pergau the work has proceeded slowly for want of funds. Six hundred thousand two hundred and six cubic yards of earth, and 120,557 cubic yards of rock have been excavated for main line, 33,526 cubic yards in stream deviations and 82,800 cubic yards in station yards.

Rails have been laid as far as the 61st mile. The line between Tanah Merah and Kuala Krai is approaching completion, the only works of any size remaining to be completed being Kusial station and three bridges.

*Kelantan Bridge.*—This bridge, consisting of five spans of 250 feet and five spans of 150 feet, was completed on 6th November, 1923. Seven other small girder bridges and all foundations, piers and abutments for the Nal bridge were also completed during the year.

During the year the construction branch hauled 429 wagons of general merchandise for the traffic open lines branch between Tanah Merah and Kuala Krai, and also carried the mails for the Kelantan Government.

The expenditure during the year amounted to \$1,702,132.

#### EAST COAST RAILWAY: PAHANG SECTION.

189. This Railway was opened for traffic as far as Kuala Lipis (141½ miles from Gemas) in October, 1917. The section from Kuala Lipis to Padang Tungku, 5 miles 49 chains in length, was opened for traffic on the 16th March, 1921, and the section from Padang Tungku, mile 147½, to Chigar Perah, mile 163½, was opened for traffic on 15th November, 1923. The work now in progress commencing from Chigar Perah runs northwards towards Tumpat.

The distance from Chigar Perah to the Pahang-Kelantan boundary is 24 miles and the total distance Chigar Perah to Tumpat is 164 miles. The distance from railhead, Pahang, to railhead, Kelantan, is 98 miles.

All the necessary land has been acquired.



The work which had been stopped beyond Chigar Perah in 1921 was resumed towards the end of the year.

*Felling and Clearing.*—Overhanging trees, blaker, and heavy undergrowth were cleared from 147th mile to Tunnel site (171 $\frac{3}{4}$  mile). During the year 38,865 cubic yards of earthwork were executed on the main line and 14,026 cubic yards in stream diversion of which 695 cubic yards were rock. Two thousand six hundred and forty-six cubic yards were done in station yards and 16,002 cubic yards on account of slips.

*Bridges and Culverts.*—The Jelai bridge, which is the largest on the section, consists of two spans of 200 feet and two of 100 feet. Considerable difficulties were experienced in the mid-stream foundations, but the bridge was completed early in November, 1923.

The expenditure during the year amounted to \$148,975.

#### NEW ENGINE SHED, CARRIAGE SHED AND GOODS YARD, IPOH.

190. The work on the new engine shed, etc., Ipoh, was commenced in April, 1918, but owing to the lack of funds was discontinued in June, 1923, except for maintenance.

The unmarried clerks' quarters (16 units) were completed during the year.

The expenditure during the year amounted to \$29,600.

#### KUALA KUBU DEVIATION.

191. The length of this deviation is 5 miles. Construction work was started in August, 1920, but progress has been slow on account of the financial situation.

Main line earthwork has been completed with the exception of filling behind the abutments of two bridges in course of construction. Forty-nine thousand eight hundred and sixty-two cubic yards have been executed during the year, making a total of 541,473 cubic yards to date.

Of four bridges on this section, two have been completed and the remaining two are in course of construction. All the 21 culverts have been completed.

The construction of the station yard at Kuala Kubu Road is in progress, earthwork and platelaying of sidings being well in hand. Good progress has been made with the construction of the station building, staff quarters, etc.

Work has been somewhat delayed during the last part of the year owing to excessive rain. The effect of this has been felt mostly on the construction of the bridges, considerable difficulty having been experienced with excavation for foundations.

The expenditure during the year amounted to \$353,086.

#### PORT SWETTENHAM DOUBLING.

192. The survey for the doubling of the line, Kuala Lumpur to Port Swettenham, was completed in 1918 and construction work was started in February, 1920. These works were closed down in September, 1921, owing to the financial situation.

During the year under review surveys were made of the proposed Klang deviation and bridge sites to the west of Belfield bridge, and two sites were selected. Preliminary survey was then made of the possible deviation and three schemes with plans and comparative estimates were prepared and submitted. Preliminary designs of the Klang river bridge and approaches were also prepared.

In connection with the above, bores were also sunk at various bridge sites. A total of 1,126 feet was bored.

The expenditure during the year amounted to \$38,324.

#### DOUBLING LINE, BATU JUNCTION TO KUALA LUMPUR AND SUNGEI BESI.

193. Construction was commenced in 1920 and good progress made during 1921 and 1922. The work on this doubling was entirely closed down at the end of 1922 and nothing was done during the year under review.

#### CARRIAGE AND ENGINE SHED AND GOODS YARD, SEREMBAN.

194. The work on carriage and engine shed and goods yard, Seremban, was commenced in February, 1918, but from 1921 progress has been very slow on account of the financial situation.



The work on the Rasak Road deviation was continued and completed during the year. The deviation was opened for traffic in June. The approach road to the goods shed, the road to Public Works Department reserve, the approach road to class V quarters and the approach road to District Engineer's Office and class VI quarters were completed during the year.

A concrete floor was laid in the goods shed. Filling swamp in Public Works Department and Railway reserve was continued and completed.

The expenditure during the year amounted to \$29,763.

#### DOUBLING LINE, SINGAPORE RAILWAY, NEW STATION, ETC.

195. With the exception of the acquisition of land at a cost of \$10,778, no construction work was carried out during the year.

#### PRAI DOUBLING, WHARVES, ALTERATIONS AND ADDITIONS, ETC.

196. Messrs. Topham, Jones and Railton, Limited, contractors for the jetty, wharves, etc., commenced work in May, 1918. The land works under this contract including the blockwork wall with the exception of the gap left opposite the old Prye Dock, were completed. Unexpected difficulty was met with in dredging owing to the excessive siltage.

*Dredging.*—The dredger "Merwede" was at work night and day for 193 days, being stopped two days for Government inspection of machinery and a further four days for docking for inspection of hull.

Grabbing by floating cranes alongside the wall and around the jetty was carried out and the berths swept and all obstructions removed; grabbing was also carried on in the lighter and turning basins.

The dredger "Merwede" and tug "Pentower" were taken over from the contractors by the Federated Malay States Government, and repairs to these craft by the Penang Harbour Board started on 29th September, 1923, these repairs being practically completed at the end of the year. No dredging was carried on after the end of July.

*Reclamations.*—The facing of the banks of the Southern Reclamation with granite pitching was completed by 16th May, 1923.

The work on the Northern Reclamation was stopped on May 26th, 1923, and the delivery of stone to Messrs. Topham, Jones and Railton, Limited, from Kodiang Quarry was completed on June 18th, 1923.

*Jetty and Coal Wharf.*—These were completed the previous year and both have been utilized by vessels using the port.

*Wharf Widening.*—Work on this was rapidly carried on and the whole completed by the 16th May, 1923, including the laying and surfacing of the roadways behind the whole of the blockwork wall.

Excavation	...	...	...	...	...	176,000 cubic yards
Granite rubble in seating, apron and backing	...	...	...	...	...	119,697 "
Concrete in blockwork	...	...	...	...	...	43,445 "
„ superstructure	...	...	...	...	...	3,940 "

A gap of 100 feet at 10.00 feet below L.W.O.S.T. was left opposite the entrance to the old Prye Dock and the materials to complete the wall left on the ground and handed over to the Construction Department, Federated Malay States Railways.

All works were closed down in September and only sufficient staff retained for the maintenance of stores and plant.

During the year 11 vessels have called at the port and discharged cargo.

The expenditure during the year amounted to \$1,396,980.

#### CAUSEWAY ACROSS JOHORE STRAITS.

197. The contract for the erection of the Causeway was let to Messrs. Topham, Jones and Railton, Limited, who commenced work in June, 1919.

The progress made with the construction of these works during the year was very satisfactory.

The Lock at Johore was taken over by the Federated Malay States Railways on the 1st January, 1923, and has been in regular use by shipping since that date, the total number of craft passing through the lock during the year being 13,513.

The rolling lift bridge, carrying the railway and roadway across the lock, was completed, the operating cabin was erected and the electrical operating and controlling gear was installed and connected with the Johore Power Station.

During the first half of the year the half width bank to carry the temporary track was completed to formation level, the Straits being closed up to high water level on the 1st of June.



The pitching on the west side of the Causeway and a length of 1,960 feet of the parapet wall were completed, and the laying of the temporary track was commenced at the end of July.

The permanent way for a single line of rails was laid over the partially completed Causeway and opened for goods traffic on the 17th September and for passenger traffic on the 1st October, one year in advance of the contract date for the completion of the whole of the works.

During the latter half of the year the culverts on the Johore side were completed and very substantial progress was made with the completion of the Causeway to the full width, the setting of toe blocks, pitching, etc., on the east side of the work being two-thirds completed at the end of the year.

Five hundred and eighty thousand six hundred and eighty-three cubic yards of rubble were deposited in the Causeway during the year, bringing the total quantity deposited to date to 1,519,056 cubic yards and leaving an estimated quantity of about 41,000 cubic yards to complete the work.

On the opening of the Causeway for railway traffic the wagon ferry power house and the landing stage on the Johore side of the Straits were dismantled and removed to allow the east and west wing walls of the lock to be completed.

The site of the uncompleted portion of the east wing wall was enclosed by a cofferdam and at the end of the year excavation in trenches for the wall was well advanced. Good progress was also made towards completing the dredging in front of the west wing wall.

The expenditure during the year chargeable to the Federated Malay States amounted to \$2,879,376.

#### PENANG HILLS RAILWAYS.

198. The line was completed and opened for passenger traffic on 21st October, 1923. This railway was handed over to the Colonial Government as from 1st January, 1924, and is being operated by the Penang Municipality.

The expenditure during the year amounted to \$187,772.

#### WATER SUPPLY FOR PRAI.

199. Beyond the maintenance of plant and stores, nothing was done towards completion of this work.

The expenditure during the year amounted to \$46,900.

#### NAVAL BASE RAILWAY.

200. Surveys were started on September 24th and at the end of the year the trial survey was completed and final line pegged to 35 chains.

No construction work was done.

The expenditure during the year amounted to \$7,157, the money being advanced by the Admiralty.

#### STORES.

201. During the year stores and materials for the Railway Construction Branch were purchased to the value of \$492,894, of which the amount paid through the Crown Agents was \$8,943. Value of stores in hand at the close of the year 1923 was \$313,875.

Indents to the estimated value of \$13,676 were despatched to the Crown Agents.

#### GENERAL.

Mr. R. H. Bilke, Chief Accountant, who proceeded on long leave on 8th December, 1922, returned and resumed duty on 15th September, 1923.

Mr. H. B. Polglase, who was seconded to the Railway Department as Acting Chief Accountant from 13th December, 1922, ceased to act in that capacity with effect from 15th September, 1923.

Mr. R. P. Walker, Assistant Accountant, acted as Deputy Accountant throughout the year.

Mr. F. L. Dennis, Assistant Accountant, proceeded on long leave on 4th July, 1923, and was still on leave at the end of the year.

Mr. L. A. McGowan was appointed as Audit Inspector and assumed duty on 4th October, 1923.

Mr. A. E. Hawkins, Audit Inspector, acted as Assistant Accountant, with effect from 4th July, 1923.

Major E. J. Soper was appointed as Engineering Accountant and assumed duty on 22nd October, 1923.



Mr. F. H. English, Secretary to General Manager, who proceeded on long leave on the 16th of November, 1922, retired from the service with effect from 19th November, 1923.

Mr. A. Palmer, Senior District Engineer, who acted as Secretary to General Manager, was confirmed in the appointment with effect from 19th November, 1923.

Mr. F. Titcombe, Assistant Secretary to General Manager, proceeded on long leave on 2nd August, 1923, and was still on leave at the end of the year.

Mr. G. L. Miller, Assistant Accountant, who was temporarily transferred to the General Manager's Office, was appointed an Assistant Secretary to General Manager, with effect from 1st August, 1923.

Mr. A. Allan, Station Superintendent and Traffic Inspector, who was temporarily transferred to the General Manager's Office, was appointed an Assistant Secretary to General Manager, with effect from 1st August, 1923.

Mr. T. E. Wells, Assistant Traffic Manager, proceeded on long leave on 5th May, 1923, and was still on leave at the end of the year.

Mr. J. J. Taberner, Station Superintendent and Traffic Inspector, who proceeded on long leave on 14th February, 1923, returned and resumed duty on 8th August, 1923.

Mr. J. B. Human, Traffic Signal Inspector, who proceeded on long leave on 8th March, 1923, returned and resumed duty on 17th September, 1923.

Mr. J. R. Lynch, Assistant Traffic Manager, who proceeded on long leave on 17th March, 1923, retired from the service on 12th October, 1923.

Mr. A. H. L. Lanman, Station Superintendent and Traffic Inspector, who proceeded on long leave on 24th May, 1923, returned and resumed duty on 24th November, 1923.

Mr. A. F. Bidnell, Station Superintendent and Traffic Inspector, proceeded on long leave on 22nd May, 1923, and was still on leave at the end of the year.

Mr. C. E. Rooke, Assistant Traffic Manager, who went on long leave on 10th July, 1923, was still on leave at the end of the year.

Mr. A. S. Stokes, Station Superintendent and Traffic Inspector, who proceeded on long leave on 30th July, 1923, was still on leave at the end of the year.

Mr. W. G. Adams, Wharfinger, proceeded on long leave on 1st August, 1923, and was still on leave at the end of the year.

Mr. G. W. Bell, Station Superintendent and Traffic Inspector, who proceeded on long leave on 30th August, 1923, was still on leave at the end of the year.

Mr. W. J. Haskins, Senior District Engineer, acted as Chief Resident Engineer for Construction from 12th March, 1923, and was so acting at the end of the year.

Mr. K. C. Caldicott, District Engineer, Grade I, acted as Stores Superintendent from 7th December, 1923, and was so acting at the end of the year.

Mr. R. H. A. Jeff, District Engineer, Grade II, proceeded on long leave on 29th March, 1923, and was still on leave at the end of the year.

Captain F. W. Howl, District Engineer, Grade II, returned from long leave and resumed duty on 22nd January, 1923.

Mr. S. McWatt Dunsmore, District Engineer, Grade II, who proceeded on long leave on 2nd January, 1923, returned and resumed duty on 12th October, 1923.

Mr. J. G. Cornwell, Assistant Engineer, proceeded on six months' leave on 19th July, 1923, prior to retirement.

Mr. B. Morris, Chief Permanent Way Inspector, who went on long leave on 25th April, 1923, died on 16th September, 1923.

Mr. C. Faulkner, Permanent Way Inspector, proceeded on long leave on 30th July, 1923, and was on leave at the end of the year.

Mr. H. B. Allison, Assistant Engineer, who went on long leave on 14th July, 1923, was still on leave at the end of the year.

Mr. C. H. Wyatt, Assistant Commissioner of Railway Police, proceeded on six months' medical leave on 14th June, 1923, and was still on leave at the end of the year.

Mr. W. A. Newman, Chief Inspector of Police, acted as Assistant Commissioner of Railway Police, with effect from 14th June, 1923, during the period of Mr. Wyatt's absence.

Mr. H. Richmond, Assistant Signal Engineer, proceeded on long leave on 1st January, 1923, and returned and resumed duty on 27th September, 1923.

Mr. A. W. Maxwell, District Telegraph Engineer, who went on long leave on 20th March, 1923, was still on leave at the end of the year.



Mr. F. W. Stones, Stores Superintendent, proceeded on long leave on 7th December, 1923, and was on leave at the end of the year.

Mr. B. S. Mee, Deputy Stores Superintendent, relinquished his appointment on 16th July, 1923, taking up an appointment in the Customs Department.

Mr. W. E. Williams, Storekeeper, acted as Deputy Stores Superintendent, with effect from 25th October, 1923.

Mr. G. C. Forbes, Locomotive Superintendent, proceeded on three months' leave on 19th December, 1923, prior to retirement.

Mr. A. W. S. Graeme, Deputy Locomotive Superintendent, acted as Locomotive Superintendent, with effect from 19th December, 1923.

Mr. A. E. Holmes Brown, District Locomotive Superintendent, proceeded on long leave on the 10th May, 1923, and returned and resumed duty on 8th December, 1923.

Mr. A. W. Butterworth, District Locomotive Superintendent, proceeded on three months' leave from 12th April, 1923, prior to retirement.

Mr. E. Robertson, Assistant Locomotive Superintendent, left the service upon termination of his agreement on 21st December, 1923.

Mr. E. Hibberd, Assistant Locomotive Superintendent, proceeded on long leave on the 29th August, 1923, and was still on leave at the end of the year.

Mr. J. F. Edington, Machine Shop Foreman, was promoted to Works Assistant, with effect from 12th July, 1923.

Mr. B. Davies, Plant Foreman, acted as District Locomotive Superintendent, with effect from 10th May, 1923, to 7th December, 1923, and as Assistant Locomotive Superintendent from 21st December, 1923, until the end of the year.

Mr. H. H. Leigh, Running Assistant, proceeded on long leave on the 12th April, 1923, and was still on leave at the end of the year.

Mr. H. J. Trevett, Locomotive Foreman, acted as Running Assistant, with effect from 12th April, 1923.

Mr. G. Tomlinson, Boiler Assistant, proceeded on long leave on 23rd February, 1923, and returned and resumed duty on 26th October, 1923.

Mr. F. J. Barnett assumed duty as Outside Electrical Foreman, with effect from 26th October, 1923.

Mr. N. C. J. Saunders assumed duty as Outside Electrical Foreman, with effect from 1st December, 1923.

Mr. K. M. Grist, Section Engineer, retired from the service on pension with effect from 31st August, 1923.

Mr. T. H. Ellis, Construction Inspector, retired from the service on pension with effect from 1st September, 1923.

Mr. T. Grieve, Deputy Chief Resident Engineer for Construction, proceeded on long leave on the 9th February, 1923, and was still on leave at the end of the year.

Mr. H. S. Haskins, Section Engineer, proceeded on long leave on 3rd October, 1923, and was still on leave at the end of the year.

Mr. J. F. Hay, Section Engineer, proceeded on long leave on 3rd December, 1923, and was on leave at the end of the year.

Mr. S. Halford, Assistant Chief Surveyor, proceeded on long leave on 28th December, and was on leave at the end of the year.

Mr. G. C. Hagger, Divisional Engineer, resigned from the service on the 3rd May, 1923.

Mr. A. Waterhouse, Tunnel Foreman, left the service upon termination of his agreement on the 5th February, 1923.

The services of Mr. G. E. H. Allen, Section Engineer, and Mr. W. C. G. Rodda, Foreman Mason, were terminated on the 19th January and 14th March, 1923, respectively, owing to closing down of works and reduction of staff.

GENERAL MANAGER'S OFFICE,  
KUALA LUMPUR, 3rd May, 1924.

P. A. ANTHONY,  
General Manager, F.M.S. Railways.



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## No. 1.—RECEIPTS AND EXPENDITURE ON CAPITAL ACCOUNT.

Cr.

To Expenditure.	Amount expended to 31st December, 1922.	Amount ex- pended during year as per No. 2.	Transfers from Lines not open for traffic to Open Line account.	Amount expended to 31st December, 1923.	By Receipts.	Amount received to 31st December, 1922.	Amount received during year.	Total.
	\$ c.	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Lines open for Traffic ... ..	57,867,683 58	85,053 50	18,579,715 16	106,532,452 24	Received from Federal Government—	174,071,920 68	Cr. 1,010,814 24	173,061,106 44
Lines not open for Traffic— New Lines ... ..	18,853,659 74	567,477 72	Cr. 4,873,093 53	14,548,083 93	Received from Straits Settlements Loan, 1921—	12,719,951 23	6,194,048 24	18,913,999 47
Widenings and Additions ... ..	35,001,341 23	4,746,749 70	Cr. 13,706,621 63	26,041,469 30				
Lines Leased ... ..	651,383 79	Cr. 46,975 66	...	604,408 13				
Rolling Stock ... ..	29,652,908 05	Cr. 85,000 13	...	29,567,907 92				
Manufacturing and Repairing Works and Plant ... ..	3,603,794 38	3,587 46	...	3,607,381 84				
Total Capital Expended on Railway ... ..	175,630,810 77	5,270,892 59	...	180,901,703 36				
Steamer and Ferry Service ... ..	744,853 43	Cr. 4,750 00	...	740,103 43				
Docks, Harbours and Wharves... ..	6,547,320 85	Cr. 78,080 39	...	6,469,240 46				
Hotels ... ..	654,885 02	Cr. 278 20	...	654,606 82				
Electric Power Stations ... ..	125,554 08	...	...	125,554 08				
Land and Property not forming part of the Railway or Stations	2,996,945 44	Cr. 4,550 00	...	2,992,395 44				
Saw-mill ... ..	91,502 32	...	...	91,502 32				
Total Expenditure ... ..	186,791,871 91	5,183,234 00	...	191,975,105 91	Total Receipts ... ..	186,791,871 91	5,183,234 00	191,975,105 91



## No. 2.—DETAILS OF CAPITAL EXPENDITURE FOR THE YEAR 1923.

Item Nos. in 1923 Estimates.	Votes chargeable.	Loan Account.	Ordinary Capital Account.	Total.
		\$ c.	\$ c.	\$ c.
	<b>LINES OPEN FOR TRAFFIC.</b>			
1	Relaying Main Line 63rd-71st mile (Taiping Pass Section) ... ..	9,860 00		
2	Renewal of Steelwork in existing bridges now under standard loading ... ..	9,227 75		
3	Additional Passenger and Goods Accommodation, Tampin	16,114 18		
4	District Offices, Workshops and Stores, Gemas ...	10,587 93		
5	Marshalling Siding, Engine and Carriage Sheds, Gemas ...	46,076 21		
8/21	Relaying Branch Line, Teluk Anson—Value of Fish-plates, rails, bolts, etc., returned to Way and Works Depot. ...	...	Cr. 4,737 32	
15/21	New Railway Offices for District Officers, Kuala Lumpur— Sale of 50,000 cement bricks ... ..	...	Cr. 1,500 00	
	<i>Sundry Credits</i> ... ..	...	Cr. 575 25	
				85,053 50
	<b>LINES NOT OPEN FOR TRAFFIC.</b>			
7	East Coast Railway, Kelantan Section ... ..	1,702,131 56		
8	Do. do. Pahang Section ... ..	148,975 01		
17	Penang Hills Railway ... ..	187,771 65		
	Perlis Railway Extension ... ..	2,999 46		
	Gemas-Kuala Samantan Railway ... ..	156 55		
	Part payment by the Government of Straits Settlements of the purchase price of Penang Hills Railways Cr.	735,933 16	Cr. 738,623 35	
				567,477 72
	<b>Widenings and Alterations.</b>			
9	New Engine Shed, Carriage Shed and Goods Yard, Ipoh	29,599 79		
10	Kuala Kubu Deviation ... ..	353,085 74		
11	Doubling Line, Kuala Lumpur to Port Swettenham ...	38,324 16		
12	Do. Batu Junction to Kuala Lumpur and Sungei Besi, etc. ... ..	Cr. 15,135 04		
13	Carriage and Engine Shed, etc., Seremban ... ..	29,762 67		
14	Doubling Line, Singapore Railway, etc. ... ..	Cr. 13,820 32		
15	Prai Doubling, Wharves, etc. ... ..	1,396,979 99		
16	Causeway across Johore Straits ... ..	2,879,375 85		
6/22	Water Supply for Prai ... ..	46,899 53		
15/22	Godowns, Teluk Ayer, Singapore ... ..	1,756 46		
	Perlis Coalfields ... ..	Cr. 79 13		
				4,746,749 70
	<b>LINES LEASED.</b>			
	Two Restaurant Cars transferred to Rolling Stock ...	...	Cr. 46,975 66	Cr. 46,975 66
	<b>ROLLING STOCK.</b>			
6	Additional Rolling Stock ... ..	11,660 97		
warrant 45/23	One set Superheater Gear for "H" Class Engine ...	45 64		
	Wagons sold to Siam Coal Mines, Ltd. ... ..	...	Cr. 5,100 00	
	"B" Class Engine No. 130 sold to Malayan Collieries, Ltd.	...	Cr. 8,000 00	
	Wagons sold to Malay States Volunteer Rifles ... ..	...	Cr. 13,748 57	
	Sale of materials ... ..	...	Cr. 116,833 83	
	Two Restaurant Cars transferred from Lines Leased ...	...	46,975 66	
				Cr. 85,000 13
	<i>Carried over</i> ... ..	...	...	5,267,305 13



## No. 2.—DETAILS OF CAPITAL EXPENDITURE FOR THE YEAR 1923—(cont.)

Item Nos. in 1923 Estimates.	Votes chargeable.	Loan Account.	Ordinary Capital Account.	Total.
		\$ c.	\$ c.	\$ c.
	<i>Brought forward</i> ...	...	...	5,267,305 13
	MANUFACTURING AND REPAIRING WORKS AND PLANT.			
5	Marshalling siding, Engine and Carriage Sheds, Gemas (proportion) ... ..	3,743 00		
	<i>Sundry Credits</i> ... .. Cr.	168 21		
72/21	Additional Machinery and Plant for Loco. Workshops ...	...	12 67	3,587 46
	STEAMER AND FERRY SERVICE.			
	Sale of Steam Launches "Sah" and "Tungku Miriam"	...	Cr. 4,750 00	Cr. 4,750 00
	DOCKS, HARBOURS AND WHARVES.			
	Sale of Slipway at Port Swettenham to the Selangor Government ... ..	...	Cr. 78,064 00	
	<i>Sundry Credits</i> ... ..	...	Cr. 16 39	Cr. 78,080 39
	HOTELS.			
	<i>Sundry Credits</i> ... ..	...	Cr. 278 20	Cr. 278 20
	LAND, PROPERTY, ETC., NOT FORMING PART OF THE RAILWAY OR STATIONS.			
	Sale of quarters at Seremban ... ..	...	Cr. 1,050 00	
	Sale of Land at Penang ... ..	...	Cr. 3,500 00	
				Cr. 4,550 00
	Total ...	...	...	5,183,234 00



No. 3.—REVENUE RECEIPTS AND EXPENDITURE OF THE  
WHOLE UNDERTAKING.

See State- ment.	—	Gross Receipts.	Expenditure.	Net Receipts.	1922.		
					Gross Receipts.	Expenditure.	Net Receipts.
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
4	Railway ... ..	13,509,912 92	11,512,205 64	1,997,707 28	12,751,864 06	10,497,687 48	2,254,176 58
5	Steamer and Ferry Service	348,237 80	272,097 89	76,139 91	399,789 46	308,861 73	90,927 73
6	Docks, Harbours and Wharves	376,788 25	383,027 91	Dr. 6,239 66	322,515 52	305,292 40	17,223 12
	Steamship Agency ... ..	...	...	...	9,135 44	535 48	8,599 96
	Total ...	14,234,938 97	12,167,331 44	2,067,607 53	13,483,304 48	11,112,377 09	2,370,927 39
	Miscellaneous Receipts—						
	Rents from Houses and Lands ... ..	...	298,629 54				215,857 79
	Rents from Hotels ... ..	...	51,300 00				56,500 00
	Other Rents ... ..	...	43,801 84				43,863 04
			393,731 38				316,220 83
	Less Upkeep of Property ... ..	...	311,226 96				212,684 01
				82,504 42			103,536 82
	General Interest ... ..	...	...	46,435 57			16,798 71
	Total Net Income ... ..	...	...	2,196,547 52			2,491,262 92
	Deduct—Rentals and Fixed Charges—						
	Rents Payable ... ..	...	129,198 67				130,257 85
	Rent on Leased Lines ... ..	...	357,000 00				357,000 00
				486,198 67			487,257 85
	Total Net Profit ... ..	...	...	1,710,348 85			2,004,005 07



Dr.

## No. 4.—RECEIPTS AND EXPENDITURE IN RESPECT OF RAILWAY WORKING.

Cr.

See Abstract.	To Expenditure.	1923.		1922.		Percentage of Traffic Receipts.		By Gross Receipts.	1923.		1922.		Percentage of Traffic Receipts.	
						1923.	1922.						1923.	1922.
		\$	c.	\$	c.				\$	c.	\$	c.		
(A)	Maintenance and Renewal of Way and Works	2,875,565	72	2,240,428	20	21.55	17.76	Passenger Train Traffic—						
(B)	Rolling Stock—							Ordinary Passengers, 1st Class	682,726	25	665,092	34		
	(1) Locomotives ...	878,960	07	880,215	75	...	...	2nd "	1,125,513	03	1,056,111	66		
	(2) Carriages ...	368,311	21	302,238	30	...	...	3rd "	3,983,898	50	3,684,260	20		
	(3) Wagons ...	340,834	63	256,062	55	...	...	Immigrants ...	12,888	93	16,681	61		
		1,588,105	91	1,438,516	60	11.90	11.40	Season Tickets, 1st Class	3,544	51	4,850	28	43.50	42.99
(C)	Locomotive Running Expenses	2,500,337	30	2,489,123	99	18.74	19.73	2nd "	26,855	85	27,333	48		
(D)	Traffic Expenses	2,592,669	56	2,632,811	78	19.43	20.87	3rd "	10,977	88	9,560	18		
		5,093,006	86	5,121,935	77	38.17	40.60	Total Receipts from Passengers	41,378	24	41,743	94	0.31	0.33
(E)	General Charges	1,887,868	63	1,674,171	95	14.15	13.28	Mails ...	65,072	95	67,188	07	43.81	43.32
	Legal Expenses	3,123	13	1,645	00	0.02	...	Parcels and Other Merchandise by Passenger Train	774,751	60	681,455	54	0.49	0.53
	Assessment on Tamil Labour	50,740	00	16,582	50	0.38	0.14						5.81	5.40
	Importation of Labour	...	...	Cr. 126	87	...	...	Total Passenger Train Receipts	839,824	55	748,643	61	6.30	5.93
	Compensation	6,965	19	4,534	33	0.05	0.04							
	Total Traffic Expenditure	11,505,380	44	10,497,687	48	86.22	83.22	Goods Train Traffic—						
								Merchandise	4,021,952	59	3,576,129	63	30.13	28.35
								Live Stock	225,527	83	179,485	81	1.69	1.42
								Tin and Tin-ore	230,918	58	223,410	15	1.73	1.77
								Rubber	1,068,152	85	1,470,445	01	8.01	11.66
								Coal, Coke and Firewood	795,582	37	662,361	32	5.96	5.26
								Other Minerals	315,633	34	289,321	42	2.37	2.29
	Johore Causeway Lock	6,825	20	...	...			Total Goods Train Receipts	6,657,767	56	6,401,153	34	49.89	50.75
	Miscellaneous	...	...	...	...			Total Traffic Receipts	13,343,997	06	12,613,686	70	100.00	100.00
	Total Expenditure	11,512,205	64	10,497,687	48			Mileage, Demurrage and Wagon Hire, etc.	Dr. 1,359	40	Dr. 839	03		
	Net Receipts	1,997,707	28	2,254,176	58			Johore Causeway Lock	13	75	...	...		
								Miscellaneous	167,261	51	139,016	39		
	Total	13,509,912	92	12,751,864	06			Total	13,509,912	92	12,751,864	06		



## ABSTRACT A.—MAINTENANCE AND RENEWAL OF WAY AND WORKS.

	1923.		1922.
	\$	c.	\$ c.
1.—Superintendence—			
Salaries ... ..	412,487	85	452,544 60
Office Expenses... ..	16,702	15	20,575 37
			429,190 00
2.—Maintenance of Roads, Bridges and Works—			
Earthworks ... ..	72,042	57	61,757 74
Bridges, Tunnels, Culverts, Retaining Walls, River			
Improvements and Other Works ... ..	107,402	59	67,893 00
Roads and Fences ... ..	33,512	54	22,635 07
			212,957 70
3.—Maintenance of Permanent Way—			
Renewals of Running Lines and Sidings—			
Wages... ..	9,798	66	1,435 17
Materials ... ..	88,658	38	104,759 99
Engine Power ... ..	2,580	20	...
Repairs of Running Lines and Sidings—			
Wages ... ..	821,912	45	782,424 15
Materials ... ..	661,006	67	244,408 59
Engine Power and Wagon Repairs 53,916 52	1,536,835	64	50,767 01
			1,637,872 88
4.—Maintenance of Signalling ... ..	...		125,654 83
5.— „ Telegraphs ... ..	...		179,781 92
			116,398 80
			138,407 88
6.—Maintenance of Stations and Buildings—			
Stations, Depôts and Offices ... ..	151,226	74	107,574 41
Engine and Carriage Sheds ... ..	16,984	82	11,660 62
Locomotive Carriage and Wagon Workshops ... ..	7,031	65	Cr. 1,027 93
Other Buildings ... ..	2,923	20	2,942 07
			178,166 41
7.—Miscellaneous ... ..	...		111,941 98
			55,271 66
Total ...	...		2,875,565 72
			2,240,428 20



## ABSTRACT B.—MAINTENANCE AND RENEWAL OF ROLLING STOCK.

## (1) LOCOMOTIVES.

	1923.		1922.	
	\$	c.	\$	c.
1.—Superintendence—				
Salaries ... ..	88,220	13	103,708	05
Office Expenses ... ..	2,223	39	2,623	62
		90,443		106,331
2.—Complete Renewals—				
Wages ... ..	...		...	
Materials ... ..	...		...	
		...		...
3.—Repairs and Partial Renewals—				
Wages ... ..	377,862	32	408,705	10
Materials ... ..	354,656	13	287,669	86
		732,518		696,374
4.—Purchase of New Locomotives ... ..				
		...		...
5.—Workshop Expenses—				
Repairs and Renewals of Machinery and				
Plant ... ..	32,599	57	47,363	80
Other Expenses ... ..	48,329	36	50,562	08
		80,928		97,925
		903,890		900,632
Deduct Engine Power Supplied ... ..		24,930		20,416
		878,960		880,215
Total ...		07		75

## (2) CARRIAGES.

	1923.		1922.	
	\$	c.	\$	c.
1.—Superintendence—				
Salaries ... ..	35,597	60	31,910	17
Office Expenses... ..	992	97	791	25
		36,590		32,701
2.—Complete Renewals—				
Wages ... ..	...		...	
Materials ... ..	...		...	
		...		...
3.—Repairs and Partial Renewals—				
Wages ... ..	152,470	76	125,755	41
Materials ... ..	143,106	86	91,095	46
		295,577		216,850
4.—Purchase of New Carriages ... ..				
		...		23,152
5.—Workshop Expenses—				
Repairs and Renewals of Machinery and				
Plant ... ..	14,559	03	14,284	32
Other Expenses ... ..	21,583	99	15,248	88
		36,143		29,533
		368,311		302,238
Total ...		21		30

## (3) WAGONS.

	1923.		1922.	
	\$	c.	\$	c.
1.—Superintendence—				
Salaries ... ..	30,954	43	23,932	63
Office Expenses ... ..	1,100	91	749	60
		32,055		24,682
2.—Complete Renewals—				
Wages ... ..	...		4	35
Materials ... ..	...		8,396	13
		...		8,400
3.—Repairs and Partial Renewals—				
Wages ... ..	132,583	27	94,316	56
Materials ... ..	124,440	74	100,684	45
		257,024		195,001
4.—Purchase of New Wagons ... ..				
		11,683		...
5.—Workshop Expenses—				
Repairs and Renewals of Machinery and				
Plant ... ..	16,141	53	13,532	52
Other Expenses ... ..	23,930	07	14,446	31
		40,071		27,978
		340,834		256,062
Total ...		63		55



## ABSTRACT C.—LOCOMOTIVE RUNNING EXPENSES.

		1923.	1922.
	\$ c.	\$ c.	\$ c.
1.—Superintendence—			
Salaries ... ..	121,951 54		115,330 31
Office Expenses ... ..	5,491 68		4,974 95
		127,443 22	
2.—Steam Train Working—			
Wages connected with the running of Locomotives	714,676 44		728,995 53
Fuel ... ..	1,497,768 66		1,400,540 72
Water ... ..	97,432 51		104,605 08
Lubricants ... ..	84,027 94		155,339 64
Other Stores, including Clothing ... ..	26,732 85		32,979 52
Miscellaneous ... ..	13,293 25		11,029 98
		2,433,931 65	
		2,561,374 87	2,553,795 73
Deduct Engine Power Supplied ...		61,037 57	64,671 74
Total ...		2,500,337 30	2,489,123 99

## ABSTRACT D.—TRAFFIC EXPENSES.

		1923.	1922.
	\$ c.	\$ c.	\$ c.
1.—Salaries and Wages—			
Superintendence ... ..	326,450 50		349,450 19
Station Masters and Clerks ... ..	942,896 55		939,502 31
Signalmen and Gatemen ... ..	226,339 75		240,360 77
Porters, etc. ... ..	197,819 40		229,561 81
Police ... ..	153,613 66		153,747 33
Guards ... ..	215,631 51		209,898 28
Shunting... ..	56,491 94		58,954 56
		2,119,243 31	2,181,475 25
2.—Fuel, Lighting, Water and General Stores ... ..		172,855 60	159,826 46
3.—Clothing ... ..		38,132 97	51,148 45
4.—Printing, Advertising, Stationery and Tickets ... ..		94,838 19	85,938 37
5.—Cleansing, Lubricating and Lighting of Vehicles ... ..		162,817 31	149,487 48
6.—Miscellaneous ... ..		4,782 18	4,935 77
Total ...		2,592,669 56	2,632,811 78

## ABSTRACT E.—GENERAL CHARGES.

	1923.	1922.
	\$ c.	\$ c.
Salaries of G.M.R., C.A. and Staff—		
Salaries ... ..	356,084 39	354,856 06
Office Expenses ... ..	12,107 29	12,642 42
Medical Expenses ... ..	51,017 38	40,841 33
Contribution to cost of External Audit Department ... ..		28,994 00
Gratuities ... ..	400 00	169 91
Pensions and Gratuities under Pension Laws ... ..	176,316 43	118,460 87
Passages of Officers ... ..	87,137 22	126,265 48
Education Fees for the Children of Police Officers and Constables ... ..	342 50	354 25
Temporary Allowance ... ..	632,994 88	749,605 56
Fees to Unofficial Members of Railway Board ... ..	10,000 00	
Travelling Expenses in connection with the Railway Board ... ..	475 04	
Gemas Allowance ... ..		310 73
Railway Institutes and Sanatoria ... ..	2,836 96	5,292 09
Loss incurred by writing down value of Australian Materials Account... ..		232,182 79
" " " equipment for Hotels ... ..	10,589 54	
" " " Suspense Stock... ..	539,735 44	
Sundries ... ..	7,831 56	4,196 46
Total ...	1,887,868 63	1,674,171 95



## No. 5.—RECEIPTS AND EXPENDITURE IN RESPECT OF STEAMER AND FERRY SERVICES.

Dr.

Cr.

To Expenditure.	1923.	1922.	By Gross Receipts.	1923.	1922.
	\$ c.	\$ c.		\$ c.	\$ c.
1. Salaries and Wages ... ..	136,488 38	155,714 84	1. Passengers ... ..	160,483 90	168,491 38
2. Fuel ... ..	55,087 06	63,981 76	2. Parcels and other Coaching Traffic	32,009 97	28,323 31
3. Stores, Lubricants, Water, etc. ...	13,446 27	27,467 42	3. Mails ... ..	1,375 54	1,450 54
4. Repairs ... ..	65,977 55	60,707 67	4. Goods ... ..	150,051 23	197,549 87
5. Harbour Fees and Light Dues ...	180 00	180 00	5. Live Stock ... ..	746 13	498 30
6. Miscellaneous ... ..	918 63	810 04	6. Miscellaneous ... ..	3,571 03	3,476 06
	272,097 89	308,861 73			
Balance ...	76,139 91	90,927 73			
Total ...	348,237 80	399,789 46	Total ...	348,237 80	399,789 46

## No. 6.—RECEIPTS AND EXPENDITURE IN RESPECT OF DOCKS, HARBOURS AND WHARVES.

Dr.

Cr.

To Expenditure.	1923.	1922.	By Gross Receipts.	1923.	1922.
	\$ c.	\$ c.		\$ c.	\$ c.
1. Superintendence ... ..	2,543 97	2,095 68	1. Wharfage ... ..	321,178 00	280,349 92
2. Maintenance—Wharves, etc. ...	38,963 46	30,690 95	2. Lighterage and Towage ... ..	6,978 75	2,596 26
Do. Tugs and Tongkangs	100,359 26	22,471 92	3. Cooly Labour ... ..	39,576 27	28,636 64
3. Working Expenses, Tugs and Tongkangs—Salaries ... ..	12,571 87	14,596 54	4. Miscellaneous ... ..	9,055 23	10,932 70
Other Charges ... ..	31,932 61	27,859 32			
4. Wages not included in above ...	183,325 10	187,093 50			
5. Miscellaneous ... ..	13,331 64	20,484 49			
	383,027 91	305,292 40	Total Receipts ...	376,788 25	322,515 52
Balance ...	...	17,223 12	Balance ...	6,239 66	...
Total ...	383,027 91	322,515 52	Total ...	383,027 91	322,515 52



Dr.

## No. 7.—ELECTRIC POWER AND LIGHT ACCOUNT.

Cr.

—		1923.		1922.		—		1923.		1922.			
		\$	c.	\$	c.	\$	c.	Number of Units.	\$	c.	Number of Units.	\$	c.
1.—Superintendence—													
Salaries .. .. .		48,879	08		40,772 96			548,195	93,883	61	554,401	79,785	38
Office Expenses .. .. .		847	20		883 05			805,372	137,927	77	814,491	117,215	56
Total Superintendence ..			49,726 28		41,656 01			...	12,728	03	...	9,570	38
2.—Generation—													
Maintenance of Buildings ..	}	7,496 93		4,296 82									
„ of Plant, Machinery and Tools .. .. .													
Maintenance of Feeders, Cables and Accessories .. .. .													
Wages .. .. .		21,379	88		18,939 64								
Fuel ... .. .		37,517	93		37,920 46								
Oil, Waste, Water and Stores ..		12,819	78		11,965 61								
Total Generation ..			79,214 52		73,122 53				13,025	97		* 81,042	64
3.—Distribution—													
Maintenance of Feeders, Mains and Apparatus .. .. .	}	16,274 79		53,306 97									
Maintenance of Meters, Switches, Fuses, Lamps, etc. .. .. .													
Wages .. .. .													
Total Distribution ..			49,879 25		109,353 19								
4.—Purchase of Current .. .. .			78,745 33		63,482 23								
Total ..			257,565 38		287,613 96			Total ..		257,565 38		287,613	96

\* Includes wages and materials debited direct to abstract "D," Traffic Expenses, in 1923.







## II.—ROLLING STOCK.

## A.—Steam Locomotives and Tenders.

Description.	Number 1923.	Total.	Year 1922, Number.
Tender Engines—			
4 4 0 Wheel Type ... ..	18	...	18
4 6 0 „ ... ..	42	...	42
4 6 2 „ ... ..	112	...	112
0 6 6 0 „ ... ..	2	...	2
2 6 0 „ ... ..	10	...	10
		184	
Tank Engines—			
0 6 0 Wheel Type ... ..	11	...	11
0 6 4 „ ... ..	31	...	31
4 4 0 „ ... ..	24	...	25
4 4 2 „ ... ..	2	...	2
		68	
Total Engines ... ..	...	252	253
„ Tenders ... ..	...	184	184

## B.—Rail Motor Vehicles.

	Year 1923.		Year 1922.	
	Number.	Carrying Capacity.	Number.	Carrying Capacity.
		Seats.		Seats.
Steam Power ... ..	4	300	4	300

## C.—Coaching Vehicles.

	Bogie.	Four Wheeled.	Number.	Seats or Berths.				Year 1922.	
				1st Class.	2nd Class.	3rd Class.	Total in 1923.	No.	Seats or Berths.
PASSENGER CARRIAGES.									
Carriages of Uniform Class	219	11	230	712	2,009	12,379	15,100	240	15,409
Composite Carriages ...	181	8	189	1,010	1,865	4,227	7,102	194	7,214
Restaurant Cars ... ..	13	...	13	267	...	...	267	10	204
Miscellaneous ... ..	7	1	8	103	17	...	120	8	120
Total ... ..	420	20	440	2,092	3,891	16,606	22,589	452	22,947
Sleeping Cars ... ..	11	...	11	176	...	...	176	11	176
TOTAL PASSENGER CARRIAGES ...	...	...	451				22,765	463	23,123
OTHER COACHING VEHICLES.									
Post Office Vans ... ..	2	...	2					2	
Luggage, Parcel and Brake Vans ... ..	11	14	25					25	
Carriage Trucks ... ..	...	36	36					36	
Horse-Boxes ... ..	...	29	29					30	
Miscellaneous ... ..	3	52	55					55	
TOTAL OTHER COACHING VEHICLES ...	...	...	147					148	
TOTAL COACHING VEHICLES ...	...	...	598					611	



*D.—Merchandise and Mineral Vehicles.*

	Bogie Stock.	4-wheeled Stock.	Number.	Year 1922, Number.
Open Wagons—				
Under 8 tons ... ..	...	13	13	29
8 and up to 12 tons... ..	6	1,904	1,910	1,913
Over 12 and up to 20 tons ... ..	9	...	9	9
Over 20 tons (other than special) ... ..	33	...	33	33
Covered Wagons—				
Under 8 tons ... ..	...	38	38	38
8 and up to 12 tons... ..	1	2,244	2,245	2,263
12 and up to 20 tons ... ..	...	...	...	...
Over 20 tons... ..	...	...	...	...
Mineral Wagons—				
Under 8 tons ... ..	...	...	...	...
8 and up to 12 tons... ..	...	...	...	...
Over 12 and up to 20 tons ... ..	...	...	...	...
Over 20 tons... ..	126	...	126	128
Special Wagons (for loads of exceptional dimensions and weight) ... ..	...	10	10	...
Cattle Trucks ... ..	...	252	252	272
Rail and Timber Trucks (including Twin Trucks) ... ..	...	291	291	288
Brake Vans ... ..	4	110	114	111
Miscellaneous ... ..	...	...	...	...
Total ...	179	4,862	5,041	5,084

*E.—Railway Service Vehicles.*

	Number.	1922, Number.
Ballast Wagons ... ..	280	281
Mess and Tool Vans... ..	7	4
Break-down Cranes ... ..	3	3
Travelling Cranes ... ..	37	37
Construction Wagons ... ..	444	443
Miscellaneous ... ..	60	111
Total ...	831	879

III.—ROAD VEHICLES FOR CONVEYANCE OF  
PASSENGERS AND GOODS.

	Number.	1922, Number.
Goods and Parcels Road Vehicles—		
Lorries ... ..	2	2
	2	2
Passenger Vehicles—		
Road Motors ... ..	...	...



## IV.—STEAM BOATS.

Name of Boat.	Date of Construction.	Indicated Horse-power.	Registered Tonnage. Tons.
S.S. "Johore" ... ..	1902	150	48
" " "Singapore" ... ..	1902	150	48
" " "Penang" ... ..	1899	200	57.18
" " "Perak" ... ..	1899	200	57.18
" " "Ibrahim" ... ..	1912	220	72
S.L. "Kinta" ... ..	1906	325	60
* S.T. "Martha" ... ..	1906	70	11
* " " "Edith" ... ..	1911	250	30
* " " "Mary" ... ..	1920	180	—
* " " "Prince" ... ..	1920	750	273
* " " "Betty" ... ..	1919	140	31
S.W. "Iris" ... ..	1899	40	45.75
" " "Thistle" ... ..	1919	55	20.75
Wagon Ferry No. 1 ... ..	1909	150	84
Do. No. 2 ... ..	1911	200	105
Do. No. 3 ... ..	1918	—	110

\* Used in connection with the wharf service statement V.

## V.—DOCKS, HARBOURS AND WHARVES.

Name.	Length of Quay Lineal feet.	No. of Tongkangs.	Other Craft.
Prai ... ..	136		3 hopper barges.
Pinang Tunggal ... ..	120		
Port Weld ... ..	125		
Teluk Anson ... ..	549		
Port Swettenham ... ..	1,840	77	5 tugs
Port Dickson ... ..	170		
Tumpat ... ..	312	2	1 boat
Kota Bahru (Palekbang) ... ..	264		
Kota Bahru Town ... ..	40		

## VI.—MAINTENANCE AND RENEWAL OF WAY AND WORKS—(ABSTRACT A.)

Quantities of Principal Materials Used—								
Ballast ... ..							<i>Cubic yards</i>	76,217
Fencing ... ..							<i>Miles</i>	285
Rails ... ..							<i>Tons</i>	401
Sleepers ... ..							<i>Number</i>	110,842
Miles Maintained—								<i>M. c.</i>
Miles of Road ... ..								984 33
" reduced to single track—								
Running lines ... ..								1,044 24
Sidings ... ..								158 23
Miles of Track renewed ... ..								Nil.
Relaying done during the year ... ..								4 13



## VII.—MAINTENANCE AND RENEWAL OF ROLLING STOCK—(ABSTRACT B).

	In Railway Workshops. Total.	Year 1922, Total.
Locomotives—		
Renewed . . . . .	...	...
Repaired—		
Heavy repairs . . . . .	79	85
Light „ . . . . .	24	30
Under or awaiting repairs at end of year ...	53*	57†
Rail Motors—		
Renewed . . . . .	...	...
Repaired—		
Heavy repairs . . . . .	...	1
Light „ . . . . .	1	...
Under or awaiting repairs at end of year ...	3	3
Coaching Vehicles—		
(a) Carriages—		
Renewed . . . . .	...	...
Repaired—		
Heavy repairs . . . . .	199	151
Light „ . . . . .	18	22
Under or awaiting repairs at end of year ...	83	94
(b) Other Coaching Vehicles—		
Renewed . . . . .	...	...
Repaired—		
Heavy repairs . . . . .	37	53
Light „ . . . . .	5	9
Under or awaiting repairs at end of year ...	25	22
Wagons—		
Renewed . . . . .	...	...
Repaired—		
Heavy repairs . . . . .	958	609
Light „ . . . . .	59	312
Under or awaiting repairs at end of year ...	435	430

\* Includes two Construction Department Engines.

† Includes one Construction Department Engine.

## VIII.—ENGINE MILEAGE.

	1923.				1922.			
	Train Miles, including empty trains.	Shunting Miles.	Other Miles (Assisting Light, etc.)	Total Engine Miles.	Train Miles, including empty trains.	Shunting Miles.	Other Miles (Assisting Light, etc.)	Total Engine Miles.
A.—Miles run in relation to Railway Traffic Receipts . . . . .	3,588,034	899,291	179,210	4,666,535	3,401,721	885,013	183,285	4,470,019
B.—Miles run in relation to Railway Expenditure . . . . .	3,875,971	916,509	236,445	5,028,925	3,680,370	902,888	240,267	4,823,525
C.—Miles run by Federated Malay States Railways Engines—								
Steam Tender and Tank Engines	3,869,251	916,509	236,373	5,022,133	3,656,552	902,888	240,259	4,799,699
Rail Motors . . . . .	6,720	...	72	6,792	23,818	...	8	23,826
Total . . . . .	3,875,971	916,509	236,445	5,028,925	3,680,370	902,888	240,267	4,823,525



## IX.—RAILWAY PASSENGER TRAFFIC AND RECEIPTS.

—	1923.			1922.		
	Number.	Receipts.	Average Fare per Passenger.	Number.	Receipts.	Average Fare per Passenger.
		\$ c.	\$ c.		\$ c.	\$ c.
Ordinary—						
1st Class ... ..	194,858	682,726 25	3 50	193,342	665,092 34	3 44
2nd „ ... ..	978,098	1,125,513 03	1 15	883,382	1,056,111 66	1 20
3rd „ ... ..	9,464,047	3,983,898 50	42	7,336,318	3,684,260 20	50
Immigrants ... ..	19,381	12,888 93	67	26,291	16,681 61	63
Total ... ..	10,656,384	5,805,026 71	54	8,439,333	5,422,145 81	64
Season Tickets—						
1st Class ... ..	187	3,544 51	18 95	213	4,850 28	22 77
2nd „ ... ..	3,545	26,855 85	7 58	3,594	27,333 48	7 61
3rd „ ... ..	8,252	10,977 88	1 33	6,700	9,560 18	1 43
Total ... ..	11,984	41,378 24	3 45	10,507	41,743 94	3 97

## X.—RAILWAY GOODS TRAFFIC AND RECEIPTS.

—	1923.			1922.		
	Tonnage.	Receipts.	Average Receipt per ton.	Tonnage.	Receipts.	Average Receipt per ton.
		\$ c.	\$ c.		\$ c.	\$ c.
Merchandise ... ..	657,889	4,021,952 59	6 11	593,554	3,576,129 63	6 02
Tin and Tin-ore ... ..	48,648	230,918 58	4 75	45,070	223,410 15	4 96
Rubber ... ..	113,716	1,068,152 85	9 39	124,680	1,470,445 01	11 79
Coal, Coke and Firewood ...	485,698	795,582 37	1 64	394,175	662,361 32	1 68
Other Minerals ... ..	538,238	315,633 34	59	510,366	289,321 42	57
Total ... ..	1,844,189	6,432,239 73	3 49	1,667,845	6,221,667 53	3 73
Live Stock ... ..	No. of Tons. 1,638			No. of Tons. 1,554		
„ ... ..	No. of Heads. 112,832	225,527 83	Per Head. 2 00	No. of Heads. 104,011	179,485 81	Per Head. 1 73



XI.—SUMMARY OF FINANCIAL RESULTS SECURED.

	1923.	1922.	1921.	1920.	1919.	1918.	1917.	1916.
	\$	\$	\$	\$	\$	\$	\$	\$
Total Expenditure on Capital Account ... ..	191,975,106	186,791,872	173,983,371	144,134,625	123,681,858	108,972,124	105,388,013	102,211,994
Gross Receipts from businesses carried on by the Railway (No. 3) ... ..	14,234,939	13,483,304	15,912,285	17,059,659	14,730,878	12,890,408	12,989,046	11,429,909
Revenue Expenditure on businesses carried on by the Railway (No. 3) ... ..	12,167,331	11,112,377	14,893,173	15,822,694	10,762,983	8,743,117	7,775,944	7,335,367
Net Receipts from businesses carried on by the Railway (No. 3) ... ..	2,067,608	2,370,927	1,019,112	1,236,965	3,967,895	4,147,291	5,213,102	4,094,542
Miscellaneous Receipts (Net) ... ..	128,940	120,335	<i>Dr. 201,465</i>	<i>Dr. 367,292</i>	<i>Dr. 72,242</i>	12,892	37,902	52,969
Total Net Income ... ..	2,196,548	2,491,263	817,647	869,673	3,895,654	4,160,183	5,251,004	4,147,511
Rentals and fixed charges ... ..	486,199	487,258	316,095	306,488	224,312	223,818	225,539	120,282
Contribution to Imperial Government for War Purposes ... ..	...	...	...	...	360,895	537,007	857,143	...
Total Net Profit ... ..	1,710,349	2,004,005	501,552	563,185	3,310,447	3,399,358	4,168,322	4,027,229
Yield per cent....	0.89%	1.07%	0.29%	0.39%	2.67%	3.12%	3.95%	3.94%



**XII.—NET PROFIT EARNED BY FEDERATED MALAY STATES  
RAILWAYS BETWEEN 1885 AND 1923, INCLUSIVE.**

Year.	Perak.	Selangor.	Remarks.
	\$ c.	\$ c.	
1885	15,080 46	...	First section in Perak opened on 1st June, 1885. First section in Selangor opened on 15th September, 1886, for light traffic only; earnings, \$9,579.18 only to 31st December, 1886, but no statistics kept.
1886	18,363 11	...	
1887	21,923 27	57,703 46	
1888	38,357 18	199,724 27	
1889	37,878 73	194,078 36	
1890	30,211 15	221,369 82	
1891	30,113 23	187,452 30	
1892	15,469 94	231,064 65	
1893	30,597 34	329,775 46	
1894	72,224 58	387,033 43	
1895	165,419 27	425,291 87	
1896	251,314 14	309,405 22	
1897	238,770 88	280,514 43	
1898	233,089 74	248,613 28	
1899	372,346 72	376,076 55	
1900	503,510 87	531,857 96	
1901	502,551 51	576,566 39	
1902	714,210 95	624,082 37	
			\$ c.
	3,291,433 07	5,180,609 82	= 8,472,042 89
Federal—			
		1903 ...	1,881,685 11
		1904 ...	1,474,911 07
		1905 ...	1,663,048 15
		1906 ...	1,572,337 51
		1907 ...	1,553,617 74
		1908 ...	1,609,130 60
		1909 ...	1,488,343 34
		1910 ...	2,247,073 79
		1911 ...	3,281,274 91
		1912 ...	2,666,345 23
		1913 ...	2,707,696 23
		1914 ...	2,029,187 22
		1915 ...	2,636,397 93
		1916 ...	4,027,228 54
		1917 ...	4,168,322 06
		1918 ...	3,399,358 19
		1919 ...	3,310,446 62
		1920 ...	563,185 49
		1921 ...	501,552 08
		1922 ...	2,004,005 07
		1923 ...	1,710,348 85
		Total ...	54,967,538 62

**XIII.—MONTHLY RAILWAY EARNINGS, COACHING AND GOODS  
TRAFFIC, 1923.**

	Passengers numbers.	Coaching.	Goods.	Total.
		\$ c.	\$ c.	\$ c.
January ...	766,528	527,318 51	533,209 81	1,060,528 32
February ...	931,287	558,481 15	468,575 43	1,027,056 58
March ...	941,309	602,597 55	577,957 92	1,180,555 47
April ...	901,337	577,327 86	560,537 23	1,137,865 09
May ...	958,109	568,614 50	554,003 81	1,122,618 31
June ...	841,547	534,770 09	533,197 80	1,067,967 89
July ...	852,916	544,996 68	555,482 38	1,100,479 06
August ...	906,116	556,807 72	570,823 77	1,127,631 49
September ...	867,274	523,821 73	548,075 26	1,071,896 99
October ...	888,087	549,889 83	545,656 98	1,095,546 81
November ...	905,648	548,684 13	575,782 84	1,124,466 97
December ...	908,210	592,919 75	634,464 33	1,227,384 08
Total ...	10,668,368	6,686,229 50	6,657,767 56	13,343,997 06



XIV.—STATEMENT SHOWING THE DATES ON WHICH THE VARIOUS  
SECTIONS WERE OPENED FOR TRAFFIC.

Date of opening.	From where opened.	To where opened.	Distance.	
			M.	CH.
1st June, 1885 ... ..	Taiping ... ..	Port Weld ... ..	8	6
6th May, 1890 ... ..	Taiping ... ..	Kamunting ... ..	3	50
1st July, 1892 ... ..	Kamunting ... ..	Ulu Sa'petang ... ..	5	22
7th November, 1892 ... ..	Batu Junction ... ..	Rawang ... ..	36	33
10th July, 1893 ... ..	Rawang ... ..	Serendah ... ..		
6th October, 1894 ... ..	Serendah ... ..	Kuala Kubu ... ..		
19th May, 1893 ... ..	Teluk Anson ... ..	16th mile ... ..	16	00
6th September, 1893 ... ..	16th mile ... ..	Tapah Road ... ..	1	12
17th October, 1893 ... ..	Batu Gajah ... ..	Ipoh ... ..	8	72
27th April, 1894 ... ..	Kota Bharu ... ..	Batu Gajah ... ..	5	44
29th September, 1894 ... ..	Tapah Road ... ..	Talam ... ..	7	17
18th March, 1895 ... ..	Talam ... ..	Kampar ... ..	2	19
1st May, 1895 ... ..	Kampar ... ..	Kota Bharu ... ..	8	48
1st June, 1896 ... ..	Ipoh ... ..	Tanjong Rambutan ... ..	8	25
27th November, 1896 ... ..	Tanjong Rambutan ... ..	Chemor ... ..	4	66
5th July, 1897 ... ..	Chemor ... ..	Sungei Siput ... ..	7	72
1st July, 1898 ... ..	Sungei Siput ... ..	Enggor ... ..	7	79
1st July, 1899 ... ..	Prai ... ..	Bukit Mertajam ... ..	6	40
1st September, 1899 ... ..	Ulu Sa'petang ... ..	Pondok Tanjong ... ..	3	48
1st November, 1899 ... ..	Krian River ... ..	Bagan Serai ... ..	11	8
1st September, 1900 ... ..	Bukit Mertajam ... ..	Nebong Tebal ... ..	13	70
15th September, 1900 ... ..	Enggor ... ..	Kuala Kangsar ... ..	5	34
1st November, 1900 ... ..	Perak Boundary ... ..	Tanjong Malim ... ..	7	
1st August, 1900 ... ..	Kuala Kubu ... ..	Kalumpang ... ..	14	47
1st November, 1900 ... ..	Kalumpang ... ..	Tanjong Malim ... ..		
1st May, 1901 ... ..	Bagan Serai ... ..	Alor Pongsu ... ..	4	68
1st July, 1901 ... ..	Kuala Kangsar ... ..	Padang Rengas ... ..	6	26
1st February, 1902 ... ..	Alor Pongsu ... ..	Pondok Tanjong ... ..	10	55
1st May, 1902 ... ..	Taiping ... ..	Bukit Gantang ... ..	5	4
1st May, 1902 ... ..	Tapah Road ... ..	Bidor ... ..	7	58
1st May, 1902 ... ..	Nebong Tebal ... ..	Krian River ... ..	31	
15th July, 1903 ... ..	Bukit Gantang ... ..	Padang Rengas ... ..	7	36
15th July, 1903 ... ..	Bidor ... ..	Sungkai ... ..	8	8
15th July, 1903 ... ..	Slim River ... ..	Tanjong Malim ... ..	13	51
15th August, 1903 ... ..	Sungkai ... ..	Slim River ... ..	14	39
15th February, 1905 ... ..	Batu Junction ... ..	Batu Road ... ..	36	
1st December, 1905 ... ..	Batu Road ... ..	Batu Caves ... ..	4	65
15th October, 1908 ... ..	Ipoh ... ..	Tronoh ... ..	15	50
11th September, 1909 ... ..	Tronoh ... ..	Tronoh Mines ... ..		
24th March, 1909 ... ..	Junction-Teluk Anson ... ..	New Wharves ... ..	53	
15th September, 1886 ... ..	Kuala Lumpur ... ..	Klang ... ..	26	77
1st January, 1899 ... ..	Klang ... ..	Port Swettenham ... ..		
7th November, 1892 ... ..	Kuala Lumpur ... ..	Batu Junction ... ..	2	33
1st June, 1893 ... ..	Kuala Lumpur ... ..	Pudoh ... ..	16	76
1st March, 1895 ... ..	Pudoh ... ..	Sungei Besi ... ..		
14th August, 1897 ... ..	Sungei Besi ... ..	Kajang ... ..		
14th June, 1902 ... ..	Kajang ... ..	Bangi ... ..	6	40
1st February, 1903 ... ..	Bangi ... ..	Batang Benar ... ..	5	00
2nd April, 1903 ... ..	Batang Benar ... ..	Seremban ... ..	17	23
15th July, 1905 ... ..	Seremban ... ..	Tampin ... ..	30	22
1st December, 1905 ... ..	Tampin ... ..	Malacca Town ... ..	21	13
1st October, 1906 ... ..	Tampin ... ..	Gemas ... ..	32	35
28th July, 1908 ... ..	Seremban ... ..	Port Dickson ... ..	24	66
4th April, 1910 ... ..	Gemas ... ..	Bahau ... ..	22	58
	Bahau ... ..	Kuala Pilah ... ..	12	78



XIV.—STATEMENT SHOWING THE DATES ON WHICH THE VARIOUS SECTIONS WERE OPENED FOR TRAFFIC—(cont.)

Date of opening.	From where opened.	To where opened.	Distance.
			M. CH.
1st October, 1910 ... ..	Bahau ... ..	Triang ... ..	32 72
1st August, 1911 ... ..	Triang ... ..	Semantan ... ..	20 05
1st March, 1912 ... ..	Semantan ... ..	Kuala Krau ... ..	16 40
16th November, 1912 ... ..	Kuala Krau ... ..	Kuala Teh ... ..	18 31
15th May, 1913 ... ..	Kuala Teh ... ..	Tembiling ... ..	6 07
1st February, 1913 ... ..	{ Connaught Bridge } { Junction }	Kapar ... ..	11 62
1st June, 1913 ... ..	Kapar ... ..	Jeram ... ..	7 63
1st September, 1913 ... ..	Jeram ... ..	Assam Jawa ... ..	5 47
1st September, 1913 ... ..	{ Port Swettenham } { Junction }	Salak South Junction ... ..	5 46
15th February, 1914 ... ..	Assam Jawa ... ..	Kuala Selangor ... ..	4 36
1st May, 1914 ... ..	Ampang Junction ... ..	Ampang ... ..	3 65
4th May, 1914 ... ..	Tumpat ... ..	Tanah Merah ... ..	31 75
19th October, 1914 ... ..	{ Bukit Mertajam } { Junction }	Pinang Tunggal ... ..	14 69
1st March, 1915 ... ..	Pinang Tunggal ... ..	Gurun ... ..	19 14
1st July, 1915 ... ..	Tanah Merah ... ..	Riverside ... ..	1 40
1st September, 1915 ... ..	Kuang Junction ... ..	Batu Arang ... ..	6 75
4th October, 1915 ... ..	Gurun ... ..	Alor Star ... ..	22 15
15th October, 1917 ... ..	Alor Star ... ..	Bukit Ketri ... ..	30 06
15th October, 1917 ... ..	Tembiling ... ..	Kuala Lipis ... ..	24 17
1st February, 1918 ... ..	Batu Arang... ..	Batang Berjuntai ... ..	7 01
1st March, 1918 ... ..	Bukit Ketri... ..	Padang Besar ... ..	11 66
1st September, 1920 ... ..	Pasir Mas ... ..	Rantau Panjang ... ..	11 37
16th March, 1921 ... ..	Kuala Lipis... ..	Padang Tungku ... ..	5 22
1st November, 1921 ... ..	Rantau Panjang ... ..	Siamese Boundary ... ..	15
17th September, 1923 ... ..	Johore Bahru ... ..	Woodlands ... ..	54
15th November, 1923 ... ..	Padang Tungku ... ..	Chigar Perah ... ..	16 63

XV.—STATEMENT SHOWING STAFF AND LABOUR FORCE EMPLOYED IN THE RAILWAY DEPARTMENT ON 31st DECEMBER, 1923.

Departments.	Europeans.	Eurasians.	Indians and Ceylonese.	Chinese.	Malays.	Japanese.	Siamese.	Others.	Total.
1. General Manager's Office ... ..	5	...	27	2	1	1	...	...	36
2. Chief Accountant's Department ... ..	9	3	127	25	15	...	...	...	179
3. Traffic Department ... ..	26	21	2,203	390	282	1	1	1	2,925
4. Engineering Department ... ..	36	15	5,673	202	128	...	...	...	6,054
5. Locomotive " ... ..	64	115	3,507	622	221	1	...	...	4,530
6. Stores " ... ..	5	...	128	4	6	...	...	...	143
7. Signal and Telegraph Department ... ..	9	2	506	48	72	...	...	...	637
8. Police Department ... ..	4	...	783	12	54	...	...	1	854
9. Railway Health Department ... ..	...	...	24	1	...	...	...	...	25
10. Construction Department ... ..	24	8	977	1,598	242	...	...	1	2,850
Total ... ..	182	164	13,955	2,904	1,021	3	1	3	18,233

Six hundred and nine contractors' coolies, included in 1922 and previous years, now omitted from Traffic Department figures.



1. 1911	1. 1911
2. 1912	2. 1912
3. 1913	3. 1913
4. 1914	4. 1914
5. 1915	5. 1915
6. 1916	6. 1916
7. 1917	7. 1917
8. 1918	8. 1918
9. 1919	9. 1919
10. 1920	10. 1920
11. 1921	11. 1921
12. 1922	12. 1922
13. 1923	13. 1923
14. 1924	14. 1924
15. 1925	15. 1925
16. 1926	16. 1926
17. 1927	17. 1927
18. 1928	18. 1928
19. 1929	19. 1929
20. 1930	20. 1930
21. 1931	21. 1931
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23. 1933	23. 1933
24. 1934	24. 1934
25. 1935	25. 1935
26. 1936	26. 1936
27. 1937	27. 1937
28. 1938	28. 1938
29. 1939	29. 1939
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31. 1941	31. 1941
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92. 2002	92. 2002
93. 2003	93. 2003
94. 2004	94. 2004
95. 2005	95. 2005
96. 2006	96. 2006
97. 2007	97. 2007
98. 2008	98. 2008
99. 2009	99. 2009
100. 2010	100. 2010

PRINTED AT THE  
 FEDERATED MALAY STATES GOVERNMENT PRESS,  
 KUALA LUMPUR.

1. 1911	1. 1911
2. 1912	2. 1912
3. 1913	3. 1913
4. 1914	4. 1914
5. 1915	5. 1915
6. 1916	6. 1916
7. 1917	7. 1917
8. 1918	8. 1918
9. 1919	9. 1919
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13. 1923	13. 1923
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91. 2001	91. 2001
92. 2002	92. 2002
93. 2003	93. 2003
94. 2004	94. 2004
95. 2005	95. 2005
96. 2006	96. 2006
97. 2007	97. 2007
98. 2008	98. 2008
99. 2009	99. 2009
100. 2010	100. 2010

